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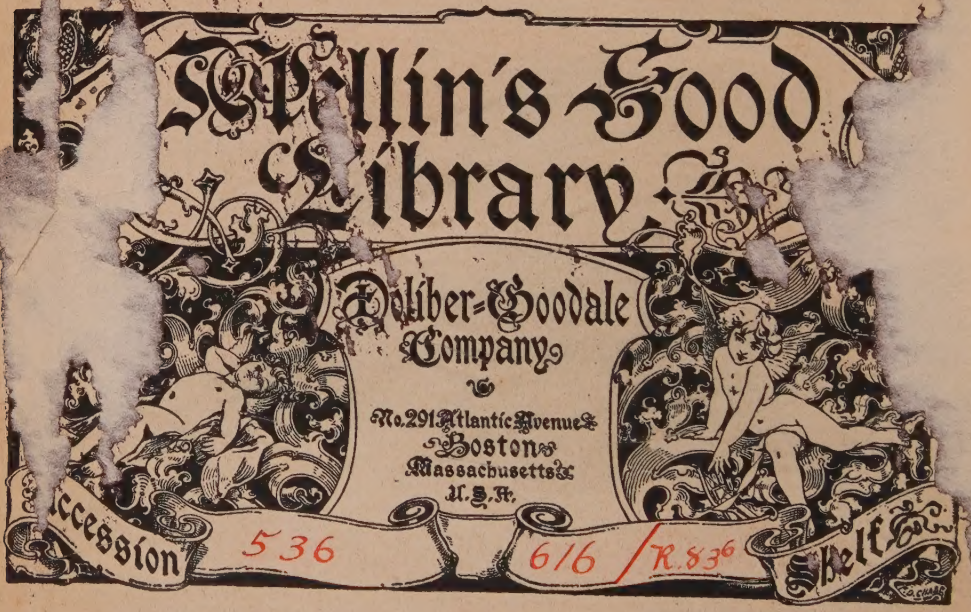
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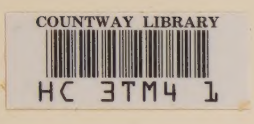

RUDDOCK'S

FAMILY DOCTOR.

A POPULAR

GUIDE FOR THE HOUSEHOLD,

GIVING THE HISTORY, CAUSES, MEANS OF PREVENTION AND SYMPTOMS OF ALL

DISEASES OF MEN, WOMEN AND CHILDREN,

AND THE

MOST APPROVED METHODS OF TREATMENT.

WITH PLAIN INSTRUCTIONS FOR THE CARE OF THE SICK, AND FULL ACCURATE DIRECTIONS FOR TREATING

Wounds, Injuries, Poisoning, Etc.,

—BY—

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Licentiate of the Royal College of Physicians; Member of the Royal College of Surgeons; Licentiate in Midwifery, (London and Edinburgh), etc. Physician to the Reading and Burkshire Dispensary,

WITH NOTES AND ADDITIONAL CHAPTERS BY

JAMES E. GROSS, M. D.,

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PREFACE.

Objections are often raised to medical works like the present, on the ground that they encourage amateur practitioners, and are therefore dangerous, and interfere with the legitimate pursuits of the medical profession. These objections are entirely groundless. In nearly every family, domestic drugs—Castor Oil, Epsom Salts, Rhubarb, Sulphur, Magnesia, Quinine, Antibilious Pills, Hydrate of Chloral, Bromide of Potassium, and even preparations of Mercury and Opium—are employed, and our object in the production of this book is to reform domestic treatment, by substituting remedies and suggesting measures which, while generally harmless for evil, are powerful for good. It is useless to attempt to suppress amateur doctoring; on the contrary, we sincerely hope that such practitioners may find much to help them in the following pages. Simple and uncomplicated cases — Cold, Fever, Dyspepsia, etc.—may often be arrested at their outset; but which, if neglected, may form the nucleus of serious or even fatal disorders.

A fact which specially justifies the preparation of this book is the necessity for meeting, as far possible, the requirements of persons residing in localities where professional homœopathic treatment is inaccessible.

The Author wishes to call especial attention to Parts I and VI, which are devoted to the consideration of Hygiene and Dietetics. These subjects are of primary importance, and if the directions therein were more generally carried into effect, a frequent reference to the purely medical portions of the book would be less necessary.

In conclusion, this book throughout is eminently practical, and

the Author has steadily kept in view the important fact that persons consult books, just as they do doctors, in the hope of being cured, and that the best book is that which teaches how the desired cures may be effected. He has great confidence in the principles enunciated in the volume; and this confidence continually deepens as, year after year, his experience accumulates from the daily application of them in the exercise of his profession.

E. HARRIS RUDDOCK.

London, Eng., January, 1876.

EDITOR'S PREFACE.

The Editor is conscious that he can add nothing to the value of Dr. Ruddock's matchless books by an extended preface. His belief that the Author's popular writings are unequalled, has only been strengthened by a more careful examination of them, word by word, in the preparation of this volume. If his addition of new chapters and notes can help the American reader to a better understanding of disease and its Homœopathic treatment, he will rejoice greatly.

He desires to acknowledge his indebtedness to Dr. J. R. Kippax for valuable notes on Diseases of the Skin, and to Dr. F. H. Foster for those on Diseases of the Eye and Ear.

J. E. G.

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THE FAMILY DOCTOR.

PART I.

CHAPTER I.

HYGIENIC OBSERVATIONS.

Hygiene.

Medical Hygiene is that branch of science which treats of the preservation of health by means which contribute to the most perfect development of the body, rendering life most vigorous, decay less rapid, and death more distant. It embraces varied influences operating upon the physical condition of individuals and communities, whether in promoting their material good, or preventing their deterioration. It consists essentially in the prevention of disease by the removal of its avoidable causes, and consequently involves legislative control, that the safety of the whole may be protected against the errors of the few. In its widest sense, the term Hygiene implies rules for the perfect culture of the mind and body. "If our knowledge were exact, and our means of application adequate, we should see the human being in his perfect beauty, as Providence probably intended him to be; in the harmonious proportions and complete balance of all parts, in which he came out of the hands of his Maker, in whose divine image, we are told, he was in the beginning made." (*Parkes.*)

Such a condition, if ever attainable, is, we fear, far distant at present. But if not fully attainable, it is at least our duty to aim at that millennium of sanitary philosophers when all disease is to be prevented, not cured. This work is our contribution towards that desirable consummation; and although our knowledge and powers are incomplete and limited, sufficient is herein pointed out to change the whole aspect of the world. While, however, we have in this volume pointed out the main causes of physical deterioration and disease, and how these may be avoided or controlled, the well-being of individuals and communities must essentially depend on personal and united efforts and self-restraint. "Sanitary improvements in man's material surroundings will not compensate for social transgressions against laws of morality; for public virtue is essential to public health, and both to national prosperity." (*Dr. G. Wilson.*)

Our observations on Hygiene are necessarily restricted and fragmentary, but withal highly important, and their general adoption would be fraught with rich advantages. It is hoped that, as the result of the education of the masses, a solid groundwork may be laid for the promotion of the national health. The rudiments of medical hygiene may be taught and rendered attractive in schools, and should not be regarded as of less moment than the languages of extinct nations, or the records of ancient history. The public press, and more especially popular medical works, may so augment the general knowledge of the causes of disease as to prevent much existing suffering and diminish unnecessary waste of human life.

General Plan of Dietary.

The food of the invalid must be regulated according to the nature, stage, and progress of the malady from which he is suffering; therefore the diet appropriate in various acute and chronic diseases will be found prescribed in the various sections of this work in their appropriate places. (See Part VI.)

In constructing dietaries the following points must be kept in view:—

Work.—Besides maintaining the body in health, food is the source of the active energy exhibited in all work or mechanical

motion. It follows, therefore, that the diet must be regulated by the amount of work to be performed.

Exercise.—The opportunity for taking regular exercise in the open air should be considered. Quiet and sedentary habits demand only a limited amount of generous diet, and much meat, with its surplus nitrogenous ingredients, would clog the system.

Age.—Milk and farinaceous substances should form the staple food up to the ninth or tenth year. At fourteen years of age a girl requires as much nutriment as a woman. A growing young man, who does the same amount of work as an adult man, requires more food than the latter. When growth and tissue changes are at their maximum, food must be good in quality and abundant in quantity.

Individual Differences.—A weakly person who eats little requires food of a better quality and nicer flavor than one of robust constitution and hearty appetite. What are termed the "fancies" of delicate persons, especially of children, are often natural instincts, pointing out what is beneficial to the system or the reverse.

Climate.—In cold seasons and climates the food should contain an excess of fatty constituents; but in warm climates the starchy or farinaceous should preponderate. More food, too, is required in cold countries, and in cold seasons, than in hot.

On Cooking Animal Food.

Cooking subserves several very important purposes, and therefore demands more intelligent consideration than is usually given to it. Uneducated persons do not understand the reasons for certain preparations and processes, and only act according to custom and the traditions of the kitchen and the sick-room. Hence, good food is wasted and spoiled, and both the healthy and diseased are disappointed of the anticipated flavor and nourishment. Cooking removes some things that might prove injurious, destroying any parasitic germs that may exist. It renders food more pleasant to the eye, agreeable to the palate, and digestible by the stomach. It softens connective tissue, relaxes muscular fibre, coagulates albumen, and solidifies fibrine, thus making the whole substance less cohesive and more easily masticated, dis-

solved, and assimilated. Previous beating and bruising facilitates the process, and makes the flesh more tender; hence the common custom of beating chops and steaks. The warmth of the food also aids digestion.

In cooking animal food, the following processes are in ordinary use: Boiling, Roasting, Broiling, Baking, Frying, Stewing. Speaking generally, about one-fourth of the weight is lost by the process; but the loss varies with the quality of the meat and the process employed. Dr. Letheby estimates the loss at the following percentages:—

	Boiling.	Baking.	Roasting.
Beef, generally,	20	29	31
Mutton, generally,	20	31	35
" Legs,	20	32	33
" Shoulders,	24	32	34
" Loins,	30	33	36
" Necks,	25	32	34
Average,	23	31	34

The loss arises principally from evaporation of water, the escape of fat and nutritive juice, and the destructive action of heat. According to Dr. Letheby it is least in boiling, greatest in roasting, because in the former process there is no evaporation of water. This suggests that in the baking and roasting endeavor should be made to prevent evaporation. Indeed, the perfection of cooking is to retain as much as possible of the constituent elements of the meat, and this is accomplished in the different methods adopted by subjecting the meat at first to a strong, quick heat, which contracts the fibres, coagulates the albumen at the surface, and thus closes up the pores by which the nutritious juices would escape. A lower and less rapidly acting heat will then suffice; for, thereafter, the cooking goes on through the agency of the natural moisture of the flesh. Converted into vapor by the heat, a kind of steaming takes place, so that whether in the oven, on the spit, or in the midst of boiling water, the meat is in reality cooked by its own steam. When properly prepared, instead of being dried up or insipid, the meat will be full of its own juice, which will flow forth as rich gravy at the first cut.

Boiling.—For this process a large joint is preferable. It

should be put suddenly into boiling water, and remain at boiling temperature for five or ten minutes. By the contraction and coagulation thus caused, the internal juice is prevented either from escaping into the water by which it is surrounded, or from being diluted and weakened by its entrance through the pores. The boiling may then cease, and the remainder of the process may go on most effectually at a temperature of 160 to 170 deg.; indeed, the common mistake is to shrink and harden the muscular fibre by the maintenance of excessive heat.

Roasting, to retain the nutritive juices, should take place quickly, and before a fierce fire at first; a lower heat, at a further distance from the fire, will then suffice.

Broiling should be done in the same way. A beef steak or mutton chop should be done quickly over a hot fire, that the natural juices may be retained.

Baking is but a method of roasting, but with this difference, that it takes place in a chamber from which there is usually no escape for the volatile fatty acids which are generated. They, therefore, impregnate the meat and render it richer and stronger, and less adapted for weak digestion.

Frying is, for the same reason, objectionable, because the fatty matter in which the meat is cooked produces an excess of the volatile acids; moreover, the fat is often burnt, and thus changed in its character, and rendered unsuitable for invalids.

Stewing is the best process for digestion. The meat should be just covered with cold water, then heated up and kept simmering, not boiling, till thoroughly done. The nutritive materials are diffused through the solid and liquid, which are then served up together. Hashing is the same process with meat previously cooked. But hashed or otherwise, twice-cooked meat is very unwholesome.

Soups, Broths, Etc.—If, however, it is desirable to extract nutriment so that it may be given in a liquid form, the meat should be finely chopped or minced, put into cold water, and after maceration for a short time, gradually heated to a simmering temperature, at which it should be kept for half an hour, if broth be required. But if soup be wanted the heating should go on to boiling point, and be maintained there, in order that the gela-

tine may be extracted to solidify the soup. Bones yield abundant gelatine, but require long boiling. It should be carefully observed that the minced meat should be put into cold water for a time, never into boiling water at first.

It is a cause of regret to find how extensively the principles we have expressed in this section are disregarded. Even in some well-informed circles there exists lamentable ignorance or extreme carelessness as to the proper method of cooking animal food, so as to utilize its most valuable constituents. (See Part VI.)

Non-Intoxicating Beverages.

Uses of Tea.—Owing to its stimulating and restorative action on the nervous system, tea is very serviceable to travelers and soldiers, and should be preferred to alcoholic stimulants after fatigue. It is equally efficacious against heat and cold; in nervous exhaustion, particularly in hot climates, or consequent on walking in the sun, especially when followed by shortness of breath, it has often proved strikingly beneficial. It excites vital action, and stimulates respiration. Though it supplies very little nutritive material, it aids the assimilation and transformation of other foods, increases cheerfulness and activity, clears and quickens the brain, stimulates the energies, and lessens the disposition to sleep. By its heat it warms the body when cold, by promoting the action of the skin it cools it when hot, and by its astringency it modifies the action of the bowels.

Tea Injurious.—As commonly prepared, tea is often the cause of much Dyspepsia, particularly when drunk in excessive quantities, or too frequently—that is, as a rule, more than once a day. When tea causes loss of appetite, palpitation of the heart, mental excitement, or sleeplessness, obviously its use should be relinquished. Tea should never be given to children, even although largely diluted. The common practice of adding a small quantity to milk-and-water begets a relish for it, leading to its use at an age when the nervous and muscular systems require no such aid.

Tea taken with animal food—"tea-dinners," as they are called—is more liable to produce indigestion than when the meal consists chiefly of bread-and-butter. Two or three hours after dinner, when digestion has proceeded too far to be much interfered

with, the habit of taking one or two small cups of tea is usually unobjectionable; but tea is better avoided at bedtime.

Green Tea.—Pure green tea is the same leaf as the black, but more quickly dried, and in good qualities is not injurious. But inferior sorts, faced with a preparation of Prussian blue, gypsum, and indigo, are decidedly so.

Flavored teas have been exposed during manufacture to the aromatic essences of plants, but though rendered somewhat more agreeable, are not of higher or lower chemical or dietetic value.

Preparation.—To make tea, especially for the dyspeptic, it should only be infused in boiling water three minutes, and then poured off into a heated teapot, so as to separate it from the leaves. Thus prepared, tea is not so likely to cause flatulence; but it is less economic than the ordinary method, much more tea being required. Soft water makes the best tea, but soda should not be used, for it only extracts the astringent tannin, while at the same time it "spoils the tea," both in flavor and beneficial effect. The water should only boil once, immediately before using it, and not for hours, as is sometimes the case; the teapot should be quite dry, as well as hot, when the leaves are put into it, and the infusion, as before stated, not allowed to exceed three minutes.

Teapots that retain the heat are better than those that allow it to pass off readily; hence black earthenware teapots should not be used; white, glazed earthenware, or porcelain, are suitable; but brightly polished silver teapots are the best, for they radiate much less heat than any other material.

Addition of Lemon.—The use of sugar in tea, except in small quantities, should be given up by persons who have a tendency to become corpulent. According to our taste, the flavor of tea is improved by substituting lemon for cream or milk; pouring the hot tea over a slice of lemon cut with the rind upon it. Besides being more palatable, the lemon-juice more effectually allays thirst, and is especially valuable at those seasons of the year when fruits and fresh vegetables are not generally to be obtained.

Coffee.—*Uses of Coffee.*—Coffee is a valuable beverage; it is invigorating without producing subsequent collapse, and the hot infusion is almost equally useful as an antidote to heat and cold; in the one case by the warmth of the infusion, in the other by its

action on the skin, while in both cases it acts beneficially by stimulating the nervous system. It increases the action of the heart and the fulness of the pulse, and excites the mucous membranes. In fatigue, privation, and indeed under ordinary circumstances, coffee is preferable to alcoholic beverages. It is useful when weary from travel in the heat, with deprivation of food. It economizes other nourishment by lessening waste. It is often serviceable in the headache of nervousness and exhaustion, or in cases of diarrhœa caused by overwork, with too much care. A strong infusion helps to keep awake persons poisoned by opium, and to allay the effects of the immoderate use of wine and spirits.

Coffee Injurious.—In some persons coffee produces sleeplessness, deranged vision, mental excitement, palpitation, and indigestion, and by such should not, therefore, be taken as a beverage. It is also somewhat laxative. It is more heating and stimulating than tea, and raises the pulse; but it is heavier and more oppressive in the stomach.

Cocoa.—*Uses of Cocoa.*—The large amount of fat and albuminoid substance renders it a most valuable article of diet, alike for strengthening the frame in conditions of debility, and sustaining it under prolonged or excessive exertion. During nursing it is most useful, tending, probably more than any other beverage, to maintain an excellent supply of maternal milk. The combination of nourishing properties which cocoa contains has led to its being compared to milk. Humboldt states that cocoa and maize cakes are used by travelers in South Africa, and that the large amount of agreeable nourishment in small bulk enables them to carry easily several days' supplies.

Preparation.—To produce from cocoa nibs one of the most wholesome and nutritious of beverages, the following method is recommended:—For two persons, take of recent nibs a small teacupful, and soak in one quart of water over night; next morning boil briskly for two hours, then strain off and use directly, with boiling milk. It should not be re-warmed, as it then loses its flavor, just as tea does when warmed up again.

Water.—There is no beverage so wholesome, or, to the unperverted taste, so agreeable, as pure water. It is the natural drink of man, is highly favorable to digestion, and may always be taken in

moderation when thirst is present. It enters into the composition of the tissues of the body, forms a necessary part of its structure, and performs such important purposes in the animal economy as to be absolutely indispensable for life and health. Water enters largely into combination with our food; and articles that we take as food can only afford nourishment by being dissolved in it. It also acts as a vehicle to convey the more dense and less fluid substances from the stomach to their destination in the body. It gives fluidity to the blood, holding in suspension, or solution, the red globules, fibrine, albumen, and all the various substances which enter into the different structures; for the whole body is formed from the blood. Not only the soft parts of the body, but even the very bones, or the materials of which they are composed, have at one time flowed in the current of the blood, suspended, or held in solution, in water. To prove how essential water is for the development and maintenance of the animal body, we may here state that a calculation has been made which shows that a human body, weighing 154 lbs., contains 111 lbs. of water. Such a fact suggests the necessity for obtaining water pure, and taking it unpolluted by animal and mineral ingredients. When practicable, water for domestic purposes should be filtered.

Water may be obtained tolerably pure in rain or snow collected in suitable vessels in the open country, away from crowded dwellings and manufactories, where processes are constantly going on which tend to its deterioration. [Spring water will be found the best for domestic use.] River, surface, and mineral water, all contain various substances dissolved in them, which render them, without distillation or filtration, unsuitable for drinking, or even to be used in the preparation of articles of diet. Even for cooking purposes and bathing, the purer the water is the better.

It is most important that the receptacles for water—tanks and cisterns—should be carefully examined and thoroughly cleansed at regular seasons, especially after a time of drought and before the approach of winter. Much mischief is done, and often disease induced, by allowing cisterns to fill up after they have been dry or the water in them low; the quantity of sediment and filth is often very great, and if not carefully washed out becomes mingled with every fresh influx of water, and thus Diphtheria,

Enteric Fever, and other blood diseases may be set up. The deleterious consequences that ensue from neglect of this duty are often alarming, although the source of the evil be unsuspected.

It is a fallacy to suppose that surface-well-water is purer than that obtained from deep wells, because it is more sparkling and often cooler and clearer. The sparkling of these waters is due to the presence of carbonic acid gas, and that acid is derived from the decomposition of animal and vegetable substances.

Air.

A proper supply of pure fresh air is essential to the preservation of life and health, as well as to the maintenance of cheerfulness of spirits and the consequent enjoyment of life. Although life may not be destroyed suddenly by breathing an impure atmosphere, still the vital energies are thereby slowly but surely impaired: this is especially the case with growing children and persons suffering from disease.

Impure Air.—The impurities of the air may be ranked under two heads: gases, and matters held in suspension. From the soil are wafted into the air particles of every chemical substance it contains. Near the dwellings of men, particles of carbon, hairs, fibres of cotton and woollen fabrics, etc., abound. The vegetable world contributes seeds, spores, germs, pollen, and light floating bodies. From the animal kingdom there are also germs, and particles of worn-out tissues, such as the organic vapors arising from the decomposition of animal and vegetable products.

Air Spoiled by Breathing.—In the process of breathing, the air loses a third part of its oxygen, the life-giving principle, and receives in exchange carbonic acid gas, a gas not only incapable of supporting life, but actually destructive to it. Such is the change effected by a solitary act of breathing; and if this process goes on in an ill-ventilated room where several human beings are gathered together, the carbonic acid gas accumulates, usurps the place of the oxygen consumed, and so renders the air less and less fit for the renewal of life. Carbonic acid gas cannot support combustion; hence a lighted candle partially or completely

surrounded by it burns slowly or goes out; and so is it with human beings, when more or less completely enveloped in an atmosphere charged with this gas: all the functions of the body are tardily and imperfectly performed, the muscular tissues are enfeebled, the breathing becomes oppressed, the head aches, and, in extreme cases, life is extinguished amidst sufferings of the most distressing nature. The fact can scarcely be too strongly stated that efficient ventilation cannot be secured unless sufficient space be made for the egress from the upper part of a room of the impure air, and provision in the lower part for moderate but sufficient access of fresh air from the surrounding atmosphere. In the greater number of dwelling-houses no direct provision at all has been made for this purpose, and the only ventilation obtained is due to the imperfect fittings of windows and doors. On the contrary, the floors are covered with carpets, the windows and doors made as impervious as possible to the air, and in the ceiling no apertures exist for the escape of carbonic acid gas. In this way all classes of the community suffer almost equally.

Airy Sleeping Rooms.—The fact that carbonic acid gas is inimical to health and life shows the importance of making provision for its uninterrupted removal from our houses and places of assembly, and, above all, from our sitting-rooms and sleeping-rooms. Airy, well-ventilated sleeping apartments should be ranked with the most important requirements of life, both in health and disease. Bedrooms, in which about one-third of human existence is passed, are generally too small, crowded, and badly ventilated. The doors, windows, and even chimneys are often closed, and every aperture carefully guarded so as to exclude fresh air. The consequence is, that, long before morning dawns, the atmosphere of the whole apartment becomes highly injurious, from the consumption of its oxygen, the formation of carbonic acid, and the exhalations from the lungs and the relaxed skin. In an atmosphere thus loaded with effluvia the sleep is heavy and unrefreshing, partaking more of the character of insensibility. There are some diseases in which the cause of death is simply an accumulation of carbonic acid gas in the blood; and this condition obtains, in some degree, in a badly-ventilated bedroom. If provision were made for the admission

of fresh air, and the escape of impure air, the sleep would be lighter, shorter, and more invigorating. In nearly every instance the door of the bedroom may be left open, and the lower part of the window raised a few inches — a greater or less extent according to the state of the weather—with perfect safety. A current of air may be prevented from playing on the face of the occupant by placing the bed in a proper situation, or by suspending a single curtain from the ceiling. During thick fogs or severe winds the apertures directly communicating with the external air may be closed, and ventilation secured from the adjoining room.

The importance of the subject is very correctly and strikingly put by a medical writer of the last century:—"If any person," he remarks, "will take the trouble to stand in the sun, and look at his own shadow on a white plastered wall, he will easily perceive that his whole body is a smoking mass of corruption, with a vapor exhaling from every part of it. This vapor is subtile, acrid, and offensive to the smell; if retained in the body it becomes morbid, but if reabsorbed, highly deleterious. If a number of persons, therefore, are long confined in any close place not properly ventilated, so as to inspire and swallow with their spittle the vapors of each other, they must soon feel its bad effects." Unpleasant as it is to dwell on such a subject, it is yet true that the exhalations from the human lungs and skin, if retained and undiluted with a continuous supply of oxygen (the active agent in all disinfectants), are the most repulsive with which we can come in contact. We shun the approach of the dirty and the diseased; we hide from view matters which are offensive to the sight and the smell; we carefully eschew impurities in our food and drink, and even refuse the glass that has been raised to the lips of a friend. At the same time "we resort to places of assembly, and draw into our mouths air loaded with effluvia from the lungs and skin and clothing of every individual in the promiscuous crowd: exhalations, offensive to a certain extent from the most healthy individuals, but which, rising from a living mass of skin and lung in a state of disease, and prevented by walls and ceiling from escaping, are, when thus concentrated, in the highest degree deleterious and loathsome." (*Bernan*).

The great practical inference is, that the only means of preventing persons from poisoning themselves and others is to ensure their constantly being surrounded by fresh air; otherwise, low fevers may result, and such acute diseases as Scarlatina, Measles, Small-pox, etc., may be excited in epidemic forms, often marked by malignant symptoms. The air of an apartment containing several human beings, if unchanged, not only becomes charged with carbonic acid gas, but also, as before stated, impregnated with animal particles, which fly off from the skin and lungs, so minute as scarcely to be detected by the microscope, but capable of decomposition; and which taken by the breath into the lungs may be absorbed and develop the worst forms of Scrofula and Consumption. But if these particles are given off from persons affected with, or recovering from, Small-pox, Scarlet Fever, Whooping-cough, Typhus, etc., they will exert a still more injurious influence upon the health, and probably generate in others diseases like those from which they emanated.

Sunlight.

The importance of sunlight for physical development and preservation is not duly appreciated. Women and children, as well as men, in order to be healthy and well developed, should spend a portion of each day where the solar rays can reach them directly; this being particularly necessary when there is a tendency to Scrofula. Just as sprouts of potatoes in dark cellars seek the light, and are colorless till they come under its influence, and as vegetation goes on but imperfectly in places where sunlight does not freely enter, so children and adults who live almost entirely in dark kitchens, dingy alleys, and badly lighted workshops, are pale-cheeked and feeble. Houses are only fit to be occupied at night that have been purified by the solar rays during the day.

It has been pointed out by Dr. Ellis that women and children in the huts and even the log cabins of America, which contain only one or two rooms, remain healthy and strong; but that after the settler has built a house, and furnished it with blinds and curtains, the women and children become pale-faced, bloodless, nervous, and sickly, the daughters begin to die from Consumption,

and the wives from the same, or from some of the diseases peculiar to women. At the same time the adult males, who live chiefly out-of-doors, continue healthy.

The value of sunlight for animal development may be illustrated by such facts as the following: In decaying organic solutions, animalcules do not appear if light is excluded, but are readily organized when it is admitted. The tadpole, kept in the dark, does not pass on to development as a frog, but lives and dies a tadpole, and is incapable of propagating his species. In the deep and narrow valleys among the Alps, where the direct rays of the sun are but little felt, Cretinism, or a state of Idiocy, more or less complete, commonly accompanied by an enormous Goitre, prevails, and is often hereditary. Rickets, or deformities, crookedness, and enlargement of the bones, are very common among children who are kept in dark alleys, cellars, factories, and mines.

During the prevalence of certain epidemic diseases the inhabitants who occupy houses on the side of the street upon which the sun shines directly are less subject to the prevailing disease than those who live on the shaded side. In all cities visited by the Cholera the greatest number of deaths took place in narrow streets, and on the sides of those having a northern exposure, where the salutary beams of the sun were excluded. It is stated that the number of patients cured in the hospitals of St. Petersburg was four times greater in apartments well lighted than among those confined in dark rooms. This discovery led to a complete reform in lighting the hospitals of Russia, and with the best results.

Except in severe inflammatory diseases of the eyes or brain, the very common practice of darkening the sick room is a highly prejudicial one. The restorative influence of daylight is thus excluded, and also the grateful and natural succession of light and darkness; the two always making up the same period of twenty-four hours, which favors sleep at the appropriate time, and divests the period of sickness of the monotony and weariness of perpetual night.

Healthy Dwellings.

To those who are able to choose their habitations we offer a few suggestions. The subject is especially important to delicate

families, and to persons predisposed to Consumption; it also deserves the attention of those who are healthy, and desire to maintain that condition unimpaired in themselves and their children. We advise, if possible, a country residence, and the selection of a house so constructed as to secure dryness of the foundation, walls, and roof. The site should be dry—a gentle slope, a gravel soil—and the aspect southerly or westerly; the bedrooms, especially those appropriated to cases of sickness, should have this aspect. It should also be a site from which there is thorough drainage, but towards which there is none. If the house is not upon a slope, the artificial drainage must be perfect. In towns and crowded places in which the accumulation of decomposing and decomposed animal and vegetable matter is great, artificial channels or drains must be so constructed that all noxious matters and vapors may be rapidly removed and carried to a distance, before they can impregnate the atmosphere and water. Every dwelling, to be wholesome, should be accessible to the free passage of currents of air, and provided with an unlimited supply of good water. In the choice of a site for a house, a locality should be avoided in which the water is impregnated with lead, iron, or other mineral substances, or in proximity to stagnant waters; the ground should be above the level of the mist or vapor which rises after sunset in marshy and other districts. This subject is of special importance to the Colonist who may have to select a site for his habitation. In short, the fundamental condition of healthy dwelling-places is—perfect purity of air and water; this must take precedence of all other considerations. The cause of the spread and fatality of the mediæval plagues was neglect of the conditions necessary to secure pure air and cleanliness.

Other points of subordinate importance may be glanced at. The house should not be too closely surrounded by trees, or in immediate proximity to thick woods, as they both attract and retain moisture, while they exclude much sunlight, and prevent the free circulation of air, and thus render the climate cold and damp. A cheerful situation, at the same time commanding the view of green trees, hedges, shrubs, etc., has a beneficial tendency. If compelled to live in a town, the house should face a park, square, or other open place, or at least be situate in a wide airy

street, with a favorable aspect. Lastly, a house should contain adequate bath arrangements, or at least provision for free personal ablutions.

Some who read these pages may not have it in their power to carry out these hints fully, but may be compelled to live where their occupations, families or means determine; nevertheless, even such may be benefited by these suggestions; for, although they cannot secure perfection in a house or situation, they may aim at an approximation to it.

Exercise.

Exercise strengthens and invigorates every function of the body, and is essential to health and long life. No one in health should neglect to walk a moderate distance every day, and if possible in the country, where the pure and invigorating air can be freely inhaled. Walking is the healthiest as well as the most natural mode of exercise. Other things being equal, this will insure the proper action of every organ of the body. The walk for health should be diversified, and if possible include ascents and descents, and varying scenery, and be alternated, when circumstances admit of it, with riding on horseback, active gardening, or similar pursuits; and with gymnastics and games of various kinds. Calisthenics prevent deformities as well as cure them. A gymnasium should be attached to every school, whether for boys or girls. Athletic sports and manly exercise should form a part of the education of youth, nor should they be neglected in after life, especially by persons of sedentary pursuits. Many aches and pains would rapidly vanish if the circulation were quickened by a judicious and regular use of the muscles. These modes of exercise, practiced moderately and regularly, and varied from day to day, are much more advantageous than the exciting, immoderate, and irregular exertions which characterize the ball-room, the hunting-field, and even the cricket-ground or the rowing-match, which are sometimes pursued so violently as to be followed by severe and permanent injury to the constitution. In the case of very feeble and infirm persons, carriage exercise, if such it may be called, and frictions, by means of bath sheets and gloves, over the surface of the body and extremities, are the best substitutes for active exertion.

The proper periods for exercise are when the system is not depressed by fasting or fatigue, or oppressed by the process of digestion. The robust may take exercise before breakfast; but delicate persons, who often become faint from exercise at this time, and languid during the early part of the day, had better defer it till from one to three hours after breakfast. Exercise prevents disease by giving vigor and energy to the body and its various organs and members, and thus enables them to ward off or overcome the influence of the causes which tend to impair their integrity. It cures many diseases by equalizing the circulation and the distribution of nervous energy, thus invigorating and strengthening weak organs, and removing local torpor and congestion.

Invalids should always be moderate in their exercise; take only short walks, avoid fatigue, and not stand in the open air. The best time for them is in the forenoon, arranged so that they can rest for half an hour before dinner. They should never take exercise immediately before a meal or going to bed.

[Light gymnastic exercises, such as pulling weights, light Indian clubs, light dumb-bells, the rowing machine, the chest bars, etc., will assist in developing the chest, the muscles and the general strength, in regulating the circulation, in the cure and prevention of headaches and malaise from over mental work or worry, and will give a resisting power to the system against disease that can not easily be obtained otherwise by persons whose occupation is of a sedentary nature and confining them indoors most of the time.

Care should be taken that the exercise is neither too heavy nor too long continued at any one time, or the result will be weakness rather than strength.]

Clothing.

The adoption of artificial clothing by man serves three purposes,—the regulation of the temperature of the body; protection from friction, insects, and dirt; and ornament.

In this climate clothing is chiefly employed for warmth, which purpose it secures by moderating or restraining the escape of heat from the body. Articles of clothing have no power in themselves of generating heat, and are designated as warm or cool

just in proportion as they retain or favor its escape. Thus a lady's muff and a marble floor are ordinarily of the same temperature; but the sensation produced by each is widely different, because the animal heat is retained by the muff, and rapidly carried off by the marble. Hence for clothing we select those substances which least conduct heat, such as the wool of sheep and the silk produced by silkworms, which are superior, as non-conductors, to cotton or linen. In this country we have recourse chiefly to the former in winter, and to the latter in summer, cotton and linen garments being coolest, linen cooler than cotton.

Wearing Flannel Next the Skin.—The prevalence of this common habit suggests the necessity of a word of caution. It is well known that, even in otherwise normal conditions, the skin of some persons is highly irritable and most unpleasantly excited by contact with flannel, and that when this exalted sensibility exists, the use of flannel next to the skin may develop decided physical alteration. It does this mechanically by retaining the local heat and intensifying reaction. Cases of skin disease often come before us in which Pruritus is thus aggravated and the affection prolonged, especially when combined with neglect of proper ablutions. In congested conditions of the skin, or in morbid states of the cutaneous nerves, flannel is inadmissible; or if necessary to guard against vicissitudes of the weather, it may be worn outside a linen garment, as before suggested. The diseases in which this advice is especially applicable are, according to Dr. Tilbury Fox,—Erythemata, Roseola, Urticaria, certainly Syphilodermata in their early stages, Scabies, and Prurigo. "A remembrance of this little practical fact," says the above author, "will sometimes give us the greatest cause to be thankful that we attended to it, trifling though it be." Flannel, however, is of great value in our variable climate, and may be generally worn through the whole year as a great protection to health and life. Even in summer weather flannel should not be cast aside, but a thin, light garment of that material substituted for a heavy one.

The color of clothing is not unimportant, light being preferable for the following and other reasons:—(1) White reflects the rays of heat which the black absorbs; at the same time it

impedes the transmission of heat from the body. Light-colored clothes are therefore best both for winter and summer, retaining the heat in the former season and keeping it off in the latter. (2) Particles which emanate from diseased bodies, as in miasmatic districts, and unhealthy accumulations, are much more readily absorbed by dark than by light clothing. Therefore those who are exposed to contagious influences in the sick-room, or in unhealthy neighborhoods, should wear light clothing. Dark clothes favor the transmission of contagious disease from house to house much more readily than light. Dark clothing imbibes odorous particles most readily, as the effluvia of the dissecting-room, the smell of tobacco, are at once detected in black clothing.

Frequent changing and cleansing of clothes is another point deserving attention. The practice of adopting dark-colored instead of light-colored garments has frequently its origin in economy, dark clothes tolerating an amount of dirt inadmissible in light. It should be recollected, however, that dark garments contract dirt after being worn a little time as much as light, and if not changed and cleansed may favor the production or spread of disease.

Thick, heavy clothing, the tissues of which are close and firm, is inconvenient. The textures of materials for clothing should be loose and porous, and contain air in their interstices—air being a bad conductor of heat.

"The advantage of having numerous light instead of fewer heavy coverings to the skin are these:—the stratum of air interposed between each layer of covering being a non-conductor, they are relatively much warmer than a much greater thickness in fewer pieces; secondly, they can be more easily laid aside to suit changing temperature; thirdly, being lighter, they are less apt to overheat the wearer, and thus lessen the chance of a consequent chill."

In China, one of the most changeable climates in the world, the variation in one day being frequently thirty-five or forty degrees, this is the mode adopted by the natives to protect themselves: a working man will often appear in the morning with fifteen or twenty light jackets on, one over the other, which

he gradually strips off as the day gets warm, resuming them again towards night.

Other points may be briefly referred to. Summer clothes should not be put on too soon, or winter ones too late. Thin-soled or high-heeled boots and shoes are destructive to health. High-heeled boots tend to change the long axis of the body, directing the trunk backwards, and this altering the inclination of the pelvis is likely to influence unfavorably the process of gestation. Other injuries that have resulted are—troublesome corns, inflammation of the ligaments of the ankle joint, and of their sheaths, and even dislocation of this joint. Only the anatomist knows the frightful displacement of the internal organs of the body that is caused by the suicidal habit of tight-lacing. It gives rise, more or less, to that depression of spirits so common to young ladies; and worse still, occasionally originates or aggravates organic disease of the most serious description. The muscles of the body were intended to sustain it erect; but when stays are applied they soon become indispensable, by superseding the action of the muscles; and, in accordance with a well-known law of the muscular system, when they cease to be used they cease to grow, and become insufficient for the discharge of their natural functions.

Finally, it may be stated that the clothing of children, whose feeble frames are less able to resist cold than those of adults, is generally insufficient. When a baby is divested of its long clothes, it is in danger of being insufficiently clad, the danger increasing when it can run alone and is more exposed to atmospheric influences. It can not be too strongly impressed upon those who have the charge of children that the practice of leaving those parts exposed which when grown up we find it necessary to clothe warmly, especially the lower limbs and abdomen, is a frequent cause of retarded growth, mesenteric disease, Consumption, etc. Insufficient warmth of body, whether in children or adults, renders the person more susceptible to the invasion of disease.

Bathing.

Every person in health should bathe the whole body once a day with cold water, immediately following it by friction and

gentle exercise to promote the reaction. Practiced in accordance with the directions we have given, the bath is a most potent aid to health. Much of the vigor of the ancient Romans was due to the important place the bath occupied in the every-day employments of life amongst them; and undoubtedly as a nation we should be healthier in mind and body if the bath, so often recommended in this manual, were universally adopted amongst us. Merely washing the exposed parts of the skin is by no means sufficient; the entire surface of the body requires the application of water, with the use of pure soap, for the purpose of cleanliness, and as a means of invigorating the capillary circulation, and so fortifying the system as to enable it to resist atmospheric vicissitudes. The secret of attaining these ends consists in employing the cold water in such manner and degree, and maintaining the body in such a state before and after the application, as that the reaction or glow shall be most perfect. The cold sponge bath may be adopted with safety by almost any one, the shock not being too great, and good friction rapidly causing agreeable warmth. The best period for a cold bath is on rising from bed, before the body has become chilled. The time the sponging should be continued must be regulated by the condition of the patient; if he be weak, the time should be brief, as from one to two minutes; for if continued too long, instead of tonic effects, depression will follow, which may continue during the whole of the day. If the weather and the water be very cold, and the bather delicate, the bath should be taken before a good fire. Very young children are benefited by cold sponging or bathing, even during the winter months. Cold bathing should not, therefore, be practiced when the body is cold or cooling, or when it is exhausted by exertion or fatigue, or if the system is naturally too weak, or when the skin feels chilly, until this feeling has been removed by friction or exercise. A bath should not be taken too soon after a meal; for then the circulation should be undisturbed, as the stomach requires all its power to digest the food; nor should the time spent in the bath be too long; that may vary according to circumstances from about one minute to four minutes.

Temperature.—The water of the bath should not be colder

than 60 deg., ranging from this to 65 deg., according to the season, and according to the temperature of the room. The temperature of the bath-room should be 70 deg. to 75 deg. The temperature of the bath-room is a point of great importance, and it can only be accurately measured by a thermometer; one of these useful instruments should therefore be kept in every bath-room. [Baths should never be taken in a cold room.]

If the important conditions stated above are disregarded, the immediate depressing effects of the bath will be continued; there will be no glow of reaction, and subsequent chilliness and dullness will ensue. An occasional addition of sea-salt to the water, as recommended in the next paragraph, communicates a stimulating property favorable to reaction. The reaction is further promoted by vigorous friction over the entire surface with large coarse towels, which operates both by stimulating the cutaneous vessels, and also by the muscular exertion, which promotes the more energetic action of the heart. A brisk walk after the bath also tends to promote reaction.

Sea-Salt Baths.—Those who are unable to secure sea-bathing may enjoy, to a limited extent, its advantages by adding a solution of sea-salt to the water of the bath. Sea-salt is the residuum of evaporated sea-water; and if it be added in proper quantity to a bath, so that the mineral ingredient approximates to that contained in sea-water, it will be very much more efficacious than a simple fresh-water bath, in consequence of the stimulating action of the water upon the skin imparted by the saline matter which it holds in solution. The addition of salt obviates the chill which fresh water sometimes gives. It will often be found that consumptive patients, with feeble circulation and cold hands and feet, are much benefited by a salt-water bath, who could not bear the shock of fresh water. In the absence of sea-salt, a handful of common salt may be used.

Such a bath, taken regularly in the morning, is conducive to health in two ways:—It inures the body to a degree of cold greater than it is likely to be exposed to during the rest of the day, and so protects it from the influence of atmospheric changes; and it tends to remove irregularities in the circulation, and by exciting the healthy action of the skin aids that organ in removing disease.

It is not every one, however, who can with safety practice bathing in the manner just now pointed out. Cold bathing would be very hazardous to patients who are extremely weak, or who have any organic disease, especially of the heart or lungs; there may also be some idiosyncrasy or condition of the constitution peculiar to the individual which would render such a course undesirable. Patients who have any ground for doubt on the subject should consult their medical attendant. Caution is more particularly necessary in infancy and old age. The adaptation of the cold bath to individual cases may often be determined by the following criterion:—If, after a bath, the patient remains chilly, languid, and dejected, or suffers headache, it had better be discontinued, and subsequently gradually adopted; but if the sense of cold rapidly passes off, and a glow of warmth and animation of spirits succeed and continue for some time, the cold bath is almost sure to be productive of good.

The warm bath is a great luxury, and to the feeble and exhausted frame is often very beneficial. The temperature may be varied according to the sensations of the patient, but as a rule should be that of the temperature of the blood—96 to 98 deg.; if higher than 98 deg., the bath may be followed by a profuse perspiration, which weakens the system.

Sea-bathing is of the greatest value to convalescents from acute diseases, to those whose health has been injured by excessive work, town residence with sedentary occupation, excesses of various kinds, and in many chronic illnesses, when debility is not excessive. It should not be indiscriminate. The propriety of it depends on the health of the bather, the temperature of the water, and the motion of the sea. Adults in robust health may remain from five to eight minutes; if they can swim and are accustomed to bathe, they may remain so long as they feel warm. If the water is very cold or the sea is strong, less time should be allowed. Delicate persons should choose a smooth sea. Strong persons may bathe before breakfast; others only in the forenoon. Sea-bathing is prejudicial when the body is exhausted, or overheated, or cold, or rapidly cooling. A short walk, without fatigue, should precede the bath; a longer walk, also without fatigue, should follow it. Stout, plethoric persons, liable to rushes of blood, palpitation,

giddiness, etc., should bathe very cautiously. Aged persons should regard themselves in this matter as invalids. Persons in feeble health and old age should only plunge into the sea, remain a minute or two, then leave it. Infants, feeble children, and timid children are scarcely strong enough for the open sea. Injury is done to the feeble by a disregard of their imperfect reactionary power, and to the timid by disregard of the strain upon their nervous system. Warm glow and exhilaration of spirits after the bath indicate its beneficial action. On the contrary, chilliness and depression are indications of harm.

The temperature of baths may be thus classified—cold, 33 to 60 deg.; cool, 60 to 75 deg.; temperate, 75 to 85 deg.; tepid, 85 to 92 deg.; warm, 92 to 98 deg.; hot, 98 to 112 deg.

For various forms of baths, and their adaptation to persons in disease, see Part III.

CHAPTER II.

SIGNS AND SYMPTOMS OF DISEASE.

To recognize fully the various evidences of an unhealthy action of the system, a long course of study, including both healthy and morbid anatomy, is necessary. If, however, the several points referred to in this chapter be carefully studied, they will aid us in arriving at a tolerably accurate idea of the nature and severity of the disease we have to treat. The following are common and well-known diagnostic signs.

The Pulse.

The pulse is produced partly by the forcible expulsion of blood from the heart, through the aorta (the great arterial trunk), and thence into the various arteries of the body, by each contraction of the left ventricle of the heart; and partly by the innate contractility of the arterial walls. Its character will consequently be modified by the condition of the heart, the blood-vessels, and the blood itself.

In feeling the pulse, great gentleness should be observed, so as

not to excite the action of the heart, which would defeat the object in view. The pulse may be examined in any part where an artery is so close to the surface that its throb can be plainly felt; but in general the most convenient locality is at the wrist. While examining the pulse, there must be no pressure exerted upon the artery in any part of its course, by tight sleeves, ligatures, etc. The examiner should place three fingers just above the root of the thumb and the joint of the wrist, with his thumb on the opposite side, so as to be able to regulate the pressure at will. Its frequency may thus be measured by the seconds-hand of a watch; but its peculiar characteristics, as indicative of various phases of disease, can only be appreciated by the educated hand of the medical man. By this method we can detect its rhythm, its fulness, or softness; whether by compression it may be rendered less perceptible; whether it is strong and bounding, forcing the fingers almost from the arm; or hard, or small and wiry, like the vibrations of a string; or intermittent, striking a few beats, and then apparently stopping for one or two beats; or whether the pulsations flow into each other, small and almost imperceptible.

Healthy Pulse.—The healthy pulse may be described as uniform, equal, moderately full, and swelling slowly under the fingers; it is smaller and quicker in women and children. In old age the pulse becomes hard, owing to increased firmness or to structural change in the arterial coats. The average number of beats of the healthy pulse in the minute, at different ages, is as follows:—At birth, 140; during infancy, 120 to 130; in childhood, 100; in youth, 90; in adult age, 75; in old age, 65 to 70; decrepitude, 75 to 80.

The pulse is influenced, however, by the following and other conditions, which should be considered in estimating the character of the pulse as a diagnostic sign. It is faster in the female than the male, by from six to fourteen beats; but this difference only occurs after about the eighth year. It is quickened by exertion or excitement; it is more frequent in the morning, and after taking food; it beats faster standing than sitting, and sitting than lying; but it is retarded by cold, sleep, fatigue, want of food, and by certain drugs, especially Digitalis.

Pulse in Disease.—In estimating the differences of the pulse as signs of disease, allowances must be made for those sudden irregularities which are often observable under transient excitement or temporary depression, especially of nervous persons.

The rapid pulse, especially if strong, full, and hard, indicates inflammation or fever; if small and very rapid, it points to a state of great debility, such as is often present in the last stage of Enteric fever.

The jerking pulse is marked by a quick and rather forcible beat, followed by a sudden, abrupt cessation, as if the direction of the wave of blood had been reversed, and is indicative of structural disease of the valves of the heart.

The intermittent pulse is that in which a pulsation is occasionally omitted, and is frequently owing to some obstruction in the circulation in the heart or lungs, or Inflammation or softening of the brain, Apoplexy, etc.; also in some forms of valvular disease of the heart; and where Hernia, or Enteritis, has proceeded to Gangrene of the intestine. Prolonged over-exertion, watching, want of rest, anxiety, etc., may produce it. In minor degrees, Indigestion with flatulence may produce it.

The full pulse occurs in general plethora, or in the early stages of acute disease; while the weak pulse denotes impoverished blood and an enfeebled condition of the system.

When the pulse resists compression, it is said to be hard, firm, or resistant; if it is small as well as hard, it is said to be wiry.

Temperature and the Fever Thermometer.

During the past few years considerable help has been derived in the diagnosis and treatment of disease from the use of the clinical thermometer. In all cases of illness, to count the pulse and the respirations is not more important than to measure the heat. The thermometer aids the physician in arriving at definite conclusions, and relieves him of much mental anxiety, and in many cases gives him a clue to the disease even before characteristic symptoms have made their appearance. In temperate regions the normal heat of the human body, at sheltered parts of its surface, is 98·4 deg. Fahr., or a few tenths more or less; and a persistent rising above 99·5 deg., or a depression below 97·3 deg. Fahr., are signs

of some kind of disease. The maintenance of a normal temperature, within the limits above stated, gives a complete assurance of the absence of anything beyond local and trifling disturbances; but any acute disease unnaturally elevates the temperature or animal heat, and many diseases are thus indicated some time before they could be detected by any other means.

FIG. 1.

The thermometer enables us to diagnose decisively between an inflammatory and a non-inflammatory disease; it also helps us to determine the severity of the inflammation by the number of degrees to which the thermometer is raised. Hysteria, it is well known, often simulates inflammatory disease; but the temperature of hysterical persons is natural, whereas that of persons really suffering from inflammation is always raised. A case is recorded of a girl supposed to be suffering from Hysteria simulating a case of inflammation of the membranes of the brain. The hysterical tendency of the patient led to the supposition that there was only an apparent symptom of inflammation; the thermometer determined the genuineness of the symptoms; for it showed a temperature of 103·5 deg., proving the actual existence of grave inflammation, afterwards confirmed by the fatality of the disease.

In acute fevers, the thermometer affords the best means of deciding in doubtful cases; it is often the best corrective of a too hasty conclusion, and is indispensable for prognosis. Thus, in Typhoid fever, the rise of temperature, or its abnormal fall, often indicates what is about to happen one or two days before any change in the pulse, or other sign of mischief, may be observed.

In Consumption, the thermometer affords us most valuable diagnostic information. The symptoms and signs are often obscure, or their true cause may be doubtful; especially in the early stage of the disease, when treatment is likely to be of greatest avail. The importance of the aid of the thermometer in this case will be recognized by the fact that during the deposit of tubercle in the lungs, or in any organ of the body, the temperature of the

patient is always raised from 98 deg., the normal temperature, to 102·3 deg., or even higher, the temperature increasing in proportion to the rapidity of the tubercular deposit. A persistent elevation of the general temperature of the body has often been found to exist for several weeks before loss of weight or physical signs indicating tubercle in the lungs could be appreciated. Hence an elevated temperature not only affords us certain information as to the existence of Phthisis, but the degree of that elevation enables us to estimate the extent and progress of the disease; for a persistent rise shows that the disease is progressing, or that unfavorable complications are setting in.

In Measles, the thermometer is almost the only means of learning at an early stage the invasion of Pneumonia.

In Ague, several hours before the paroxysm, the temperature of the patient's body rises considerably.

In Acute Rheumatism, a temperature of 104 deg. is always an alarming symptom, indicating grave complications, such as involvement of the valves of the heart. In short, a temperature of 104 deg. to 105 deg. in any disease indicates that its progress is not checked, and that complications are liable to arise.

In all cases of convalescence, so long as the decrease of temperature proceeds regularly as measured by the thermometer, no relapse need be feared; on the other hand, delayed decrease of temperature in Pneumonia, the persistence of a high evening temperature in Typhus or Enteric fever, or in the eruptive diseases, and the incomplete attainment of normal temperature in convalescence, are of great significance. They indicate incomplete recovery, approach of other diseases, unfavorable changes in the products of disease, or the continuance of other sources of disturbance requiring careful examination. The onset of even a slight elevation of temperature during convalescence is a warning to exercise careful watching over the patient, and especially for the maintenance of a due control over his diet and actions (*Aitken*).

These remarks might easily be extended, and illustrations multiplied of the value of the thermometer as an aid to diagnosis; but beyond recommending a small, straight instrument, with a correct scale, self-registering, and taking the observations regularly at the same hours daily throughout the disease, noting at the same

time the pulse and the breathing, we have only space for the following directions:—

The best way to take a "temperature" is to place the bulb of the thermometer under the tongue, by the side of the last molar —"wisdom tooth"—and request the patient to close the lips around the stem. The time required to ascertain the temperature correctly is from three to five minutes. Another way is to place the bulb under the armpit; but the former plan is better when practicable.

Breathing.

Healthy inspiration is performed with great ease by a nearly equal elevation of the ribs and enlargement of the chest, and by descent of the diaphragm. Expiration is the natural return of the chest to its proportions during rest, which is produced by the pressure of the external air, the ascent of the diaphragm, and the contraction of the abdominal muscles. An adult breathes about twenty times in a minute. Disease and exertion quicken the rate of breathing.

Dyspnœa, or difficult breathing, may result from wasting diseases of the lung substance; adventitious deposits in those organs (these conditions necessarily lessening the amount of breathing surface); formations of false membranes in the air passages, as in Diphtheria; and inflammation and swelling of the tonsils or tongue —all of which conditions obstruct the entrance of air into the lungs, as does also Asthma, which is a spasm of the muscular coat of the air tubes, and thus cause Dyspnœa.

Effusions into the pleuræ or pericardium, the serous membranes surrounding the lungs and heart, also induce Dyspnœa by causing compression of the lungs. Intrinsic organic and functional diseases of the heart also cause Dyspnœa. Disease of the nerves which preside over the respiratory movements, or in that part of the nervous centers from which they proceed, may also produce serious difficulty of breathing. In Pleurisy, fracture of the ribs, Apoplexy, and cases of great exhaustion, when an insufficient supply of blood is sent to the great nervous center—the brain—the respiratory movements are deranged, and otherwise greatly or even fatally obstructed.

The Tongue.

This organ affords important indications:—Dryness points to diminished secretion, and is common in acute and febrile diseases; moisture is generally a favorable sign, particularly when it succeeds a dry or furred condition. A preternaturally red tongue is common in the course of the eruptive fevers; in Gastric and Bilious fevers, and in bad cases of Indigestion, the redness is often limited to the edges and tip. The "strawberry" tongue is a symptom of Scarlet fever; the fissured tongue of Typhus and Enteric fevers. When the tongue is livid or purple, there is defective oxygenation of the blood. The furred tongue is the most marked, and is common in inflammation and irritation of the mucous membranes, in diseases of the brain, in all varieties of fever, and in almost all acute and dangerous maladies. Some persons have usually a coated tongue on rising, without any other symptom of disease. This is especially the case with tobacco smokers. A uniformly white-coated tongue is not very unfavorable; a yellow coat is indicative of disordered action of the liver; a brown or black, of a low state of the vital powers, and contamination of the blood. The gradual cleaning of the tongue, first from the tip and edges, shows a tendency to health, and indicates the cleaning of the whole intestinal tract; in less fortunate cases, as the tongue gets browner, dirtier, and drier, each day, the nervous and muscular systems get weaker, and hope is gradually extinguished; when the fur separates in patches, leaving a red, glossy surface, it is also unfavorable; when the crust is rapidly removed, leaving a raw or dark-colored appearance, the prognosis must still be unfavorable.

Pain.

This is often a most important indication of the nature and seat of disease, pointing to an interruption of the harmony of the bodily organs. When attended with a throbbing sensation, consequent upon the heart's action, it is called pulsating pain; when with a feeling of tightness, tensive; when with heat, burning. Nervous pain may be recognized by its disposition to follow a certain course, without being rigidly limited to one

particular part; by its being subject to perfect intermissions; and by the suddenness with which it comes and goes. Spasmodic pain is mitigated by pressure, by frictions, and by applications of heat; it comes on suddenly with greater or less severity, terminating abruptly. Inflammatory pain is constant, attended by heat and quickened pulse, is increased by movement of the affected part, by touch or pressure, and usually mitigated by rest. Frequently pain occurs, not in the part diseased, but in a distant one. Inflammation of the liver generally first shows itself by pain in the right shoulder; inflammation of the hip joint, by pain in the knee; stone in the bladder, by pain at the end of the penis; disease of the heart, by pain down the left arm, etc.

The Skin.

In health the skin imparts to the touch the sensation of an agreeable temperature, with just sufficient moisture to preserve its softness; it is also elastic, smooth, and neither too tense nor loose. A harsh, dry, burning heat of the skin is indicative of fever, and must ever be regarded as unfavorable, especially in inflammatory conditions of internal organs. If this condition be followed by perspiration, coincident with general improvement, it is a favorable indication. Great relief is usually experienced on the occurrence of the sweating stage in Ague, Inflammatory fevers, etc. On the other hand, complications may be feared if perspiration ensue without any amelioration of other symptoms.

Partial or local perspirations indicate a deranged condition of the nervous system, or an affection of the organs beneath the perspiring surface. If perspirations occur after trifling exertion, they point to excessive weakness. Night sweats, of frequent occurrence, not only show debility, but when preceded by chills and fever, indicate a hectic and consumptive state of the constitution.

The color of the skin is also diagnostic. A bluish tint of the skin indicates structural disease of the heart. A yellow color points to biliary affections. A rich blush of the cheeks, especially if it be circumscribed, and the surrounding parts pale, indicates an irritable condition of the nervous system, or a diseased state of the lungs.

The Urine.

The urinary organs are,—the kidneys and bladder, with their appendages. The kidneys secrete the urine from the blood, and by this process the blood is relieved of many impurities, which, if retained, would give rise to disease in the whole system. The secretion of the kidneys reaches the bladder through little channels (*ureters*), and the urine is ultimately discharged through the urinary canal (*urethra*).

Healthy urine is of a brightish yellow or amber color, a tint darker in the morning than in the afternoon, yielding a slight ammoniacal smell, devoid of unpleasant odor, and precipitating no deposit on standing, or only the merest trace of mucus, or of urates from a low temperature. In advanced age the urine becomes darker and slightly offensive; it is darker in persons who lead a very active life; different varieties of food also produce a marked effect both on the color and odor of urine. The stream of urine should be round and large, and it should be passed about four to six times in twenty-four hours without any pain or straining.

The average specific gravity of healthy urine is between 1,020 and 1,025, being in excess of water, which is the standard (1,000), and the normal quantity in adults about forty ounces in the twenty-four hours. A urinometer indicates the specific gravity.

In disease, the urine presents many varieties, and furnishes valuable indications. Thus, it may be of a dark yellow or saffron color, as in Jaundice, or derangement of the liver; it may be red or high-colored, and scanty, with quickened pulse, as in fever; it may be bloody or slimy, as in affections of the kidneys or bladder; it may be pale and copious when metamorphosis is checked, less urea excreted, and the unrenewed blood furnishes no coloring matter, as in nervous and hysterical ailments; it may be heavy, muddy, or of a purple color, showing an unfavorable condition of the system; or it may be dark or black, indicating putridity. The urine may be passed too copiously or scantily, with pain, with effort, or it may be retained with difficulty. There may be a frequent or uncontrollable desire to micturate, with burning

or scalding pain; or the pain may be only experienced in passing the last few drops; in either case local inflammation is indicated.

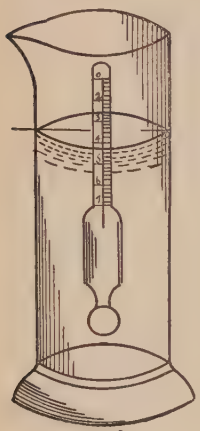


FIG. 2.

[To get the specific gravity of a specimen of urine, fill the cylindrical vessel (fig. 2) about two-thirds full, holding the cylinder obliquely while pouring the urine into it, thus avoiding as much as possible the formation of foam—if foam forms remove it with blotting paper; next let the urinometer sink, bulb down, gently into the urine, being careful not to have touched the sides of the cylinder. When it no longer sinks of its own accord, stoop down until the eye is on a level with the urine and read the number on the scale which is even with the lower convex edge of the fluid—*i. e.*, not the little elevation of liquid which by capillary attraction climbs up the stem of the urinometer a short distance, but the general surface of the urine. Depress the urinometer one degree, allow it to rise, and read again; if the second reading agrees with the first the figure is correct.—*Mitchell's Guide to Urinary Analysis.*

CHAPTER III.

THE MEDICINES, ETC.

List of the Principal Medicines Prescribed in This Work.

Their Latin and English Names, Abbreviations, and the Attenuation, in Tinctures, recommended for domestic use.

Latin.	English.	Abbrev.	Atten.
1. Acidum Nitricum	Nitric Acid	Ac.-Nit.	3x
2. Acidum Phosphoricum	Phosphoric Acid	Ac.-Phos.	3x
3. Aconitum Napellus	Monk's-hood	Acon.	3x
4. Antimonium Tartaricum	Tartar Emetic	Ant.-Tart.	3x
5. Apis Mellifica	Honey-bee	Apis.	3x
6. Arnica Montana	Leopard's-bane	Arn.	3x

	Latin.	English.	Abbrev.	Atten.
7.	Arsenicum Album	White Arsenic	Ars.	3x
8.	Belladonna	Deadly Nightshade	Bell.	3x
9.	Bryonia Alba	White Bryony	Bry.	3x
10.	Cactus Grandiflorus	Night-blooming Cereus	Cact.	3x
11.	Calcarea Carbonica	Carbonate of Lime	Calc.-C.	3x
12.	Cantharis	Spanish Fly	Canth.	3x
13.	Carbo Vegetabilis	Vegetable Charcoal	Carbo V.	3x
14.	Chamomilla Matricaria	Wild Matricary	Cham.	3x
15.	China	Peruvian Bark	China	3x
16.	Cimicifuga Racemosa	Black Snake-root	Cimic.	3x
17.	Cina Anthelmintica	Worm-seed	Cin.	3x
18.	Cocculus Indicus	Indian Berries	Cocc.	3x
19.	Coffea	Raw Coffee	Coff.	3x
20.	Colocynthis	Bitter Cucumber	Coloc.	3x
21.	Cuprum Aceticum	Acetate of Copper	Cup.-A.	3x
22.	Digitalis	Foxglove	Dig.	3x
23.	Drosera Rotundifolia	Round-leaved Sundew	Dros.	3x
24.	Dulcamara	Bitter-sweet	Dulc.	3x
25.	Ferrum Muriaticum	Muriate of Iron	Ferr.-Mur.	3x
26.	Gelsemium Sempervirens	Yellow Jessamine	Gels.	3x
27.	Hamamelis Virginica	Witch Hazel	Ham.	2x
28.	Hepar Sulphuris	Sulphide of Calcium	Hep.-S.	3x
29.	Hydrastis Canadensis	Golden Seal	Hydras.	2x
30.	Hyoscyamus Niger	Henbane	Hyos.	3x
31.	Ignatia Amara	St. Ignatius' Bean	Ign.	3x
32.	Iodium	Iodine	Iod.	3x
33.	Ipecacuanha	Ipecacuanha	Ipec.	3x
34.	Iris Versicolor	Blue-flag	Iris.	3x
35.	Kali Bichromicum	Bichromate of Potash	K.-Bich.	3x
36.	Lycopodium Clavatum	Common Club-moss	Lye.	6x
37.	Mercurius Corrosivus	Corrosive Sublimate	Merc.-Cor.	3x
38.	Mercurius Solubilis	Black Oxide of Mercury	Merc.-S.	3x
39.	Nux Vomica (Strychnos)	Vomit-nut	Nux V.	3x
40.	Opium	Opium	Opi.	3x
41.	Phosphorus	Phosphorus	Phos.	3x
42.	Podophyllum Peltatum	May-Apple	Podoph.	3x
43.	Pulsatilla Nigricans	Wind-flower	Puls.	3x
44.	Rhus Toxicodendron	Poison Oak	Rhus.	3x
45.	Sepia Succus	Inky Juice of Cuttlefish	Sep.	3x
46.	Silicea	Pure Flint	Sil.	3x
47.	Spigelia Anthelmia	Indian Pink	Spig.	3x
48.	Spongia Tosta	Toasted Sponge	Spong.	3x
49.	Sulphur	Sublimed Sulphur	Sulph.	3x
50.	Veratrum Album	White Hellebore	Ver.-Alb.	3x

Also the strong Tincture of Camphor, which must be kept by itself.

MOTHER TINCTURES FOR EXTERNAL USE.

Arnica Montana ø	Cantharis Vesicatoria ø	Ledum Palustre ø
Calendula Officinalis ø	Hamamelis Virginica ø	Rhus Toxicodendron ø

Forms, Names, and Attenuations.

The following brief description of the various forms of medicine used in homœopathic practice is given for the sake of the uninitiated. The preparations are of three kinds —viz., Tinctures, Triturations, and Pellets.

Tinctures.—These contain the active principles of the vegetable medicines, in a more or less concentrated form, and are supposed to be quicker and more decided in their action, in acute diseases, than either pilules or globules. It is therefore advisable for those who reside at a distance from medical aid to be furnished with a selection of such tinctures as are adapted to sudden and acute diseases, in addition to a complete case of the pellets or globules.

Pellets.—Pellets consist simply of a porous non-medicinal substance, medicated, by saturation, with any remedy desired. They are very tangible, and if kept in a well-corked vial retain their virtue for years. They are well-suited for domestic use, especially for commencing the practice.

Triturations.—These are in the form of powder, containing a portion of the original drug triturated with a given quantity of milk sugar, and are necessary to the administration of the lower attenuations of insoluble medicines, such as Calc., Carbo V., Hepar S., Merc., Sepia., Sil., etc.

Doses and their Repetition.

The Dose.—In determining the quantity and strength of doses, the age, sex, habits, nature of the disease, etc., must be taken into consideration. Without reference to individual peculiarities, the following may be stated as the proper dose in domestic practice:—

For an adult, two drops of the tincture, six pellets, or two grains of the trituration.

For a child, about one-half the quantity.

For an infant, one-third.

Drops or pellets are easily divided into any number of doses by mixing them in a corresponding number of spoonfuls of water, and giving one spoonful for a dose. Trituration spoons may be obtained, holding about one grain.

Directions for Taking the Medicines.—Tinctures should be dropped into the bottom of a glass by holding the bottle in an oblique manner, with the lip resting against the middle of the end surface of the cork; the bottle should then be carefully tilted, when the tincture will descend and drop from the lower edge of the cork. The vessel should be clean the mixture kept covered, and the spoon used should not be left in the mixture. If the medicine has to be kept several days, a new bottle, with a new, sound cork, should be used.

Pellets may be taken dry on the tongue, and sucked, not swallowed whole; but it is better, if convenient, to dissolve them in pure soft water.

The insoluble Triturations should be taken dry on the tongue; the soluble ones may be dissolved in a spoonful of water. Before taking medicine, the mouth should be rinsed with water.

Hours.—The most appropriate times for taking the medicines, as a rule, are, on rising in the morning, and at bedtime; if oftener prescribed, about half an hour or an hour before or about two hours after a meal. Under no circumstances should a patient be aroused from sleep to take medicine.

Repetition of Doses.—The frequency of the dose must be determined by the activity of the malady from which the patient is suffering, the urgency of the symptoms, and the effects produced by the medicines. In violent and dangerous diseases—Cholera, Croup, Diphtheria, Convulsions, etc.—the remedies may be repeated every ten, fifteen, or twenty minutes; in less urgent cases, every two, three, or four hours. In chronic maladies, every six, twelve, or twenty-four hours. When improvement takes place, the medicines should be given less frequently, and relinquished when no longer needed.

Alternation of Medicines.—To avoid the confusion resulting from mixing different remedies in one prescription, and to ascertain the simple effect of each, Homœopaths do not mix several drugs together; but in acute diseases, when the symptoms of the

malady are not met by a single remedy, and a second one is indicated, the two may be given in alternation; that is, one medicine may be followed by another at certain intervals of time, and in a regular order of succession. In Croup, for example, Acon. and Spongia, or Acon. and Iod.; in Pneumonia or Rheumatic fever, Acon. and Bry.; etc. But the alternate use of medicines should, as much as possible, be avoided. Except in violent and rapid diseases, the author rarely prescribes medicines alternately, and strongly recommends the general discontinuance of that method as one little calculated to yield precise and definite clinical experience. In order to test the value of any remedy it should be given alone. In combining medicines all exact data concerning the real action of any single agent are lost.

The list of medicines recommended for persons beginning homœopathic practice is as follows:—Nos. 3, 4, 6, 7, 8, 9, 11, 13, 14, 15, 17, 19, 20, 23, 24, 26, 28, 31, 33, 35, 36, 38, 39, 41, 43, 44, 46, 48, 49, 50.

A useful Traveller's case, or case for pocket, would include remedies numbered in the list above printed, 3, 6, 7, 8, 9, 14, 15, 20, 26, 31, 33, 37, 39, 41, 43, 44, 49, 50.

Medicine Case.—A case to suit this work should be constructed expressly to contain the medicines mentioned in the list on pp. 33, 34. It should be protected from light and heat, and also kept apart from substances which emit a strong odor. Immediately after using a bottle it should be corked again, and the corks or medicines never changed from one bottle to another.

Corks.—If a cork decay, or become damaged, a new one should be at once substituted. Except for acids, good sound corks are preferable to glass stoppers, as they more effectually prevent evaporation, preserve the virtue of the medicine, and are easily replaced when broken.

Genuine Medicines.—To obtain a beneficial action from the remedies herein prescribed, it is essential to procure them from a reputable Homœopathic Pharmacy. Failures in Homœopathic practice often arise no doubt, from the inefficient medicines.

PART II.

CHAPTER I.

ACCESSORIES IN THE TREATMENT OF DISEASE.

Cod-Liver Oil.

The value of this agent in the treatment of many constitutional diseases is amply confirmed by long experience. It should be regarded as food rather than medicine, although the minute amount of Iodine and Phosphorus it contains may account for its curative virtues in many cases in which cod-liver oil has been the only remedy given.

The complaints in which cod-liver oil is of service need not be here enumerated, as it is prescribed in numerous instances in the following pages. We may, however, state that it is specially valuable in the various forms of Scrofula—chronic discharge from the ears, strumous Ophthalmia, enlargement of the glands, strumous disease of the bones, strumous Abscesses, etc., and, in short, in all diseases which require fatty substances as food, and Iodine as a remedy. Its assimilation is promoted, and its beneficial action greatly enhanced, by the addition of ten drops of the first dilution of Iodium to each pint of the oil. This addition is especially recommended in Phthisis Pulmonalis, and Atrophy.

In the treatment of Consumption it stands pre-eminent, by almost universal consent; when given in suitable cases, its power in checking emaciation and raising the tone of the muscular structures is well known.

The value of cod-liver oil is often very marked in the sequelæ of many acute diseases or inflammations occurring in middle-

aged and in old persons, in whom the reparative powers are less active than in children; also in the after effects of the acute fevers of children who have suffered, previous to such attacks, from impoverished health, Scrofula, etc.,—as chronic discharge from the ears and nose after Scarlet Fever and Measles; the after stages of Whooping-cough; Rickets, Chorea, etc., are generally much benefited by the administration of cod-liver oil. Chronic Rheumatism and Gout, chronic Bronchitis, chronic skin diseases, and the degenerative diseases of the aged, are all more or less benefited by the employment of this agent.

Caution.—Cod-liver oil should not, however, be administered indiscriminately. It is generally inadmissible during the persistence of acute febrile symptoms, congestion, hæmoptysis, or any active form of disease; digestion is then impaired, the mucous membrane irritable, and the oil is only likely to occasion disorder. The sphere of cod-liver oil is to remove exhaustion and increase general tone; this is best accomplished when active morbid processes and local irritation have subsided, for then the system is in a condition to appropriate a larger amount of nourishment.

Some caution is necessary to be observed in the administration of oil to obviate nausea or eructations. Such effects generally result from the quantity or quality of the oil used. The large quantity of oil taken in some cases occasions disorder of the digestive mucous membrane, or it passes off with the evacuations. The appearance of any oil unchanged in the evacuations is a sign that the quantity should be reduced, as more is given than can be digested. We generally recommend it at first, in teaspoonful doses, twice a day, with, or immediately after, food; if the stomach be tolerant of it, a teaspoonful, or for young children ten or twelve drops, once a day. If there be still difficulty in retaining the oil, we prescribe it at bed-time, just as the patient is lying down to sleep. In cases of extreme irritability of the stomach, cod-liver oil may be introduced into the system by friction; a considerable amount of friction, as much as the patient can bear, facilitates absorption.

The disagreeable effects of oil, and the repugnance felt toward it, have often been created by inferior and disgusting prepara-

tions, and we fully endorse Dr. Chambers' remarks, who, writing on Consumption, says, "To find the easiest assimilated oil, and to prepare the digestion for the absorption of the oil, are the main problems in the cure of Consumption." Probably the best method of rendering the oil palatable is to have it made up in bread, as it is then scarcely tasted. The proper proportion is two to four tablespoonfuls of the oil to one pound of dough. Small pieces of ice in each dose of oil also render it almost tasteless.

Claret wine or bourbon whisky are other vehicles for cod-liver oil. The oil should be poured upon the wine or whisky, so that it does not touch the glass, but floats on the liquor as a large globule, in which way it may be swallowed without taste. A few morsels of agreeable food should then be eaten. A yet further plan to obviate taste and nausea is to take a pinch of salt immediately before and after the oil. And, if the fish be not unsuitable, one or two teaspoonfuls may be given with a sardine, the oil being poured over in the absence of the child or patient.

Ice.

Ice is a valuable therapeutic agent, and is now extensively used both internally and externally, chiefly to check hæmorrhage, to moderate inflammation, and to soothe the uneasy sensations of febrile and other disorders.

In Inflammation of the Brain or its membranes, and in the severe headache of the early stages of acute fevers, it is most useful. It is applied in small pieces, enclosed in a bladder or india-rubber bag, in the form of a cap fitted to the head.

To relieve the severe pain and vomiting in cases of Ulcer or Cancer of the stomach, a bag containing small fragments of ice should be laid on the epigastrium.

In Inflammation of the Tonsils, the Sore-throat of Scarlatina and other acute specific fevers, and in Diphtheria, the use of ice relieves pain and arrests inflammation. Ice also checks the secretions of the throat, and so obviates frequent painful efforts to detach the mucous from the crypts and follicles of the tonsils. For these purposes suitable pieces, frequently repeated, should be sucked.

In hæmorrhages ice is extremely valuable. To arrest bleeding

from the mouth, throat, or nostrils, ice should be applied directly to the bleeding vessels or to the surface, when it forms an efficient styptic. When hæmorrhage comes from the stomach or lungs, ice should be repeatedly swallowed in small pieces.

To arrest uterine hæmorrhage, by promoting firm contraction of that organ, ice should be swallowed freely; at the same time a piece of ice should be inserted high up the vagina, and, if necessary, a piece may also be introduced into the rectum.

To allay local inflammation or check hæmorrhages from the surface, ice broken into small pieces should be enclosed in a bladder, or thin india-rubber bag. When one-third filled, the air should be squeezed out of the bag, which should then be tied at its mouth, on an inserted cork, so large and long as to bear the tight pressure of the twine. The bag may then be made into almost any shape, and fitted to the irregularities of the body. (*Ringer.*) Other uses of ice, as a therapeutic agent, are suggested in the various sections of Part III.

Caution.—Ice is contra-indicated in conditions such as the following: –Old age, especially in feeble patients; Apoplexy and Coma, in persons with a feeble pulse; advanced stages of disease; extreme feebleness. In such cases the great sedative power of ice might overwhelm the patient, and stop the action of the enfeebled heart. It is also advisable to avoid too great a shock to the system in any case.

Warm and Other Baths.

Warm Bath.—The temperature of the water must be raised to 98 deg. Fahr., or to what is agreeable to the back of the hand; then, if the patient be a child, he should be immersed up to his neck, and a cold wet towel or a large sponge applied to the head (for about three minutes only); the child being kept in the bath for five, ten, or twelve minutes, but removed before the stimulating effect has passed off; otherwise reaction and depression may come on. If the sight of the water make the child afraid, a blanket should be spread over the bath, the child placed upon it and gently let down into the water, even with its dress on, if necessary to prevent fear.

The temperature should be fully maintained by additions of

fresh hot water carefully poured down the side of the bath, till the patient comes out. The bath should be given in a warm room, and a warm blanket be in readiness to wrap the patient in directly he leaves the bath.

The warm bath (92 to 98 deg. F.) and the hot bath (98 to 112 deg. F.), are remedial agents of great value in many affections. They are chiefly used to equalize the temperature of the whole body, to soothe the nervous system, to control the action of the heart, to promote perspiration, to relax the muscular and cutaneous system, and, especially, to equalize the distribution of blood throughout the body. In the latter instance a disproportionate quantity of blood in the internal organs is recalled to the surface, and free circulation promoted.

The warm bath is often of signal benefit in the diseases of children Convulsions, Spasmodic Croup, Measles, Scarlatina, etc., also in Scarlatinal Dropsy, as well as in other dropsical affections. In the fevers of children, it calms the nervous excitement, and is often followed by refreshing sleep.

It also aids the cure in inflammation of the kidneys, bladder, and uterus; at the grand climacteric a general warm bath, for forty or fifty minutes, once a week, cures or prevents many of the ailments incident to the period, by promoting free action of the skin. In spasmodic stricture of the urethra; in the passage of renal and biliary calculi; in many spasmodic affections of the bowels—Colic, etc.; in Prurigo, Tetanus, Diabetes, Bright's disease, and in the Melancholy of Insanity, it is often of signal service.

The Vapor Bath.—This has a similar action, and is applicable to most of the cases mentioned under the "warm bath," but is more particularly useful for adults in some forms of Rheumatism and dry scaly diseases of the skin. The patient being seated, undressed, upon a cane-bottomed chair, a jupon or crinoline should be placed over the shoulders, and tied round the neck. Blankets should then be secured outside this, completely covering it from top to bottom so as to retain the steam, which may be obtained by placing a pail of boiling water under the chair. When steam ceases to be evolved, it may be again produced freely by gradually immersing in the water a red-hot brick or piece of iron. During the bath one or two tumblers of cold water should be sipped. To

prevent headache the forehead should be bathed with a sponge dipped in cold water, or a napkin wrung out of cold water may be laid on the head. If necessary, also, the feet should be put into a pan of moderately hot water, the heat of which should also be maintained by adding, after a few minutes, fresh hot water. After the patient has perspired for ten or fifteen minutes, he should be quickly washed with tepid water, dried, and at once retire to bed. Or he may sit in a shallow bath at a temperature from 70 deg. to 80 deg. Fahr., the extremities and trunk being well rubbed by an assistant, and water gently poured over the head for three or four minutes, after which the patient should be dried, and retire to bed.

Care should be taken that the surface of the steaming water is not too near the seat of the chair, as the patient would be scalded if the steam were directed immediately upon a limited portion of the body. Indeed, fatal results have occurred through carelessness on this point.

The Hot-air Bath.—In this bath a spirit-lamp or a saucer containing one or two ounces of spirits-of-wine, after being set on fire, is substituted for the hot water of the vapor-bath; but the blankets are used in the same manner. It may also be followed by the tepid wash or shallow bath. As the spirit burns, heat is generated around the patient, and perspiration produced.

The Hot Foot-Bath.—Immediately before retiring to bed the patient should be undressed, but well covered with one or two blankets, which should also cover the foot-bath, so that the steam may have access to the body generally; the feet and part of the legs should then be put in hot water (98 deg. F.), and the temperature afterwards increased by fresh additions of hot water for ten, fifteen, or twenty minutes, according to the strength of the patient, and until free perspiration breaks out on the face. He should then be rapidly washed with tepid water, rubbed dry, got into bed, and well covered with clothes. Perspiration should be further encouraged by drinking cold water.

The hot foot-bath, or the hot sitz-bath, is also useful in sudden suppression of the menses during the flow, from exposure to cold or wet; it relieves the distressing sensations of the patient, and aids the return of the function. Headache, palpitation, the

hysteric sensation of choking, piles, etc., are likewise removed or relieved by a local warm bath.

The Blanket Bath.—This is an easy method of inducing perspiration. A blanket is wrung out of hot water, and wrapped round the patient. He is then packed in three or four dry blankets, and allowed to repose for thirty minutes. The coverings may then be taken off, the surface of the body rubbed with warm towels, and the patient made comfortable in bed (*Tanner*).

The Wet Pack.—A blanket or quilt should be spread on a mattress, and over it a thick linen sheet, well wrung out of cold water. In fevers, the colder the water is, the better; for delicate persons with feeble reaction, water at 68 deg. may be used. The patient is to be extended on his back naked on the wet sheet, so that the upper edge covers the back of the neck, but the lower one is to project beyond the feet; holding up the arms, one side of the sheet is to be thrown over the body and tucked in; the arms are now placed by the sides, and the other part of the wet sheet is thrown over all, and tucked rather tightly in, turning in the projecting ends under the feet. The blanket is then to be brought over all the sheet, and well tucked in around the neck, at the sides, and over the feet, so as to completely exclude the air. A stout quilt or extra blanket is to be put over all. In a short time the patient will become warm: the sensation is most agreeable, especially in fevers. The patient may remain in the pack for thirty, forty-five, or sixty minutes, the duration being regulated by the effects produced. The patient should then be put into a shallow bath at 70 deg., well washed, dried, and put to bed. It may be repeated once, twice, or thrice a day, according to circumstances and the violence of the attack. Perspiration may be encouraged by giving sips of cold water. If the head become congested, or the face flushed, while in the pack, a cold compress should be applied over the forehead for a few minutes. By attention to the above directions, almost any person can carry out the treatment. The pack promotes the removal of excess of heat by largely augmenting the exhalent action of the skin; at the same time a large amount of heat is removed by the evaporation of the water in the sheet. There is no danger of internal mischief arising, for the tendency of the pack is to divert the circulation

from the central organs, and to maintain it in vigor on the extensive surface of the body. The wet-pack is invaluable in the early stages of all fevers; and in Scarlatina, Measles, Small-pox, etc., it assists in bringing out the eruption.

Wet Compresses.

A cold compress consists of two or three folds of soft linen wrung out of cold water, applied to the affected part, and covered by a piece of oil-silk, or india-rubber-cloth, which should project a little beyond the wet cloth on all sides, so as to prevent evaporation from the linen. In parts subject to considerable motion, as the throat and neck, the edges of the oil-silk should be folded in over the wet linen so as to prevent its exposure to the air. For persons with feeble reaction, the compress may be held for a minute in front of a fire before applying it.

Compresses are generally best applied at night, as it is often impossible to keep them in close apposition while moving about. After removing them in the morning, the parts should be sponged with cold water to restore the tone of the skin.

Abdominal Compress.—This consists of two or three thicknesses of linen from about six to nine inches wide, and long enough to go round the whole body, or the linen may only cover the front part of the abdomen, or even only the seat of uneasiness; this should be wrung out of cold water, covered with oil-silk, and secured by a flannel or linen roller with strings, to keep it in nice apposition with the part which it covers. This may be worn several nights in succession, the parts being well sponged with cold water and rubbed with a coarse towel on removing it in the morning. The abdominal compress is very valuable in Typhoid fever; it tends to control Diarrhœa, checks the spread of ulceration, and so lessens the danger of perforation. In Constipation it is often a most useful adjunct to our medicines, and in Diarrhœa it relieves irritation and facilitates the cure.

Compress for the Throat.—A piece of linen or flannel should be wrung out of cold water, and wrapped in two or three thicknesses round the throat; this should be covered with oil-silk, and, over all, two or three thicknesses of flannel to maintain the warmth. When this is applied, the patient should retire to bed, and he will

generally have the satisfaction of finding his throat-difficulty much relieved by the morning.

Chest Compresses.—In Bronchitis and other inflammatory affections of the lungs or pleura, the use of wet compresses, after or before poultices, greatly aids the action of the medicines.

Sores, Ulcers, and Tumors are often benefited by compresses; in local forms of Rheumatism, as Lumbago; some inflammatory affections of the knees, ankles, and other joints; and in Sprains and other injuries they hasten the cure.

The appearance of a rash or eruption of pimples after the continued use of the compress is regarded as favorable. If the rash be very troublesome, the compress may be discontinued and glycerine and eau-de-cologne, in equal parts, smeared over the eruption.

Poultices.*

Poultices or cataplasms are recommended on account of the warmth and moisture they convey, and are applied to the skin when it, or an underlying structure, is inflamed. They mitigate pain by relaxing tension and promoting perspiration. Poultices may be made as follows:—

Flaxseed Poultices.—Boiling water should be poured into a heated bowl, and into this the meal quickly sprinkled with one hand, while the mixture is constantly stirred with a knife or spatula with the other, till a thin smooth dough is formed. If the water be added to the meal, little knots are apt to collect. The dough should be quickly spread on warmed linen already cut to the required shape, or put into a bag, and applied. Flaxseed-meal retains heat and moisture for a long time, but is liable to irritate delicate or inflamed skin.

Bread Poultices.—Put slices of bread into a basin, pour over them boiling water, and place by the fire for a few minutes, when the water should be poured off, replaced by fresh boiling water, and this again poured off, and the bread pressed, beaten with a fork, and made into a poultice. Bread poultices are valuable for their bland, non-irritating properties.

* For this and the following section the author is mainly indebted to Ringer's Therapeutics.

Charcoal Poultices.—Uniformly mix charcoal with bread poultice, and just before the application of the poultice sprinkle the surface with a layer of charcoal. Or charcoal may be sprinkled on a wound or ulcer, and a simple bread poultice applied over it. Charcoal poultices correct offensive smells from foul sores, and favor a healthier action.

Carrot Poultices.—Boil carrots quite soft, mash them and apply in the ordinary way. They are said to make wounds cleaner and healthier.

Poultices are chiefly useful in the following complaints:—Pneumonia, Pleurisy, Bronchitis, Pericarditis, Peritonitis, Acute Rheumatism, Lumbago, and to mature and facilitate the discharge of matter in Abscesses, Boils, etc.

When used to mature Abscesses or disperse inflammation, poultices should extend beyond the limits of the inflamed tissue; but after the discharge, the poultice should be very little larger than the opening through which the matter is escaping. If continued too long, large poultices sodden and irritate the parts, and may develop fresh boils around old ones.

In Pneumonia and all deep-seated inflammations, they should be renewed as soon as they become cool, and the former one not disturbed till the fresh one is ready to replace it. In Bronchitis and Pneumonia, a jacket-poultice, to go round the chest, with tapes to secure it in front and over each shoulder, is necessary to insure efficient and uniform action.

To retain heat for a long time, poultices should be covered with oil-silk, or with a layer of cotton wool. One of these methods is preferable to a very thick poultice, which might cause inconvenience or pain.

In acute Lumbago they must be applied thick, hot, large enough to cover the affected part, and be renewed as soon as they become cool. After continuing this treatment for from one to three hours, the skin should be wiped dry and covered with flannel, and this again with oil-silk. Like the poultice, this last application promotes free secretion from the skin, to which the good results are mainly due.

Dry Dressings.—If the edges of wounds be brought and kept together, all foreign particles having been removed, they may

often be allowed to heal without any assistance beyond the additional support and protection of rollers of lint. Blood, if already covering the part, is the best and most protective plaster. Layers of cotton wool and lint exclude air, moisture, and infecting germs, and promote healthy action. Dry earth or clay, finely powdered and sifted, is recommended for putrid wounds or cancerous sores.

Fomentations.

Fomentations, by means of flannel wrung out of hot or boiling water, are employed for purposes similar to poultices, but are lighter and less likely to increase the pain of sensitive parts. The hot flannel is placed in stout towelling, and twisted round till as much water as possible is squeezed out. If well wrung, it may be applied very hot without any danger of scalding the skin.

Fomentations with hot water are useful in relieving pain, arresting inflammation, and checking the formation of matter, and are often valuable adjuncts to poultices. *Acne indurata* and similar inflamed pimples can often be dispersed or reduced in size by them. Conjoined with poultices, they expedite the passage of matter to the surface, and favor its subsequent expulsion. In such cases the value of fomentations and poultices depends upon the heat and moisture; water for the fomentations should therefore be used hot, and fresh supplies of hot water added as it becomes cool. After well fomenting, poultices should be applied as hot as possible, and frequently renewed.

In Inflammations, Spasms, and pains affecting deeply-seated structures, as in the chest or abdomen, great and quick relief often follows hot fomentation.

Dry Fomentations.—When heat alone is required, and it is desirable to avoid the relaxation of tissues which moisture would occasion, dry heated substances—flannel, bran, chamomile flowers, salt, sand, etc.—are used. After thoroughly heating the substance, it should be placed in a bag made for the purpose, and which has also been previously heated. Sometimes, as in Spasm and its accompanying pain, a thin piece of flat tile, heated in an oven, and wrapped in warmed flannel, may be employed. For mere evanescent heat, flannel, strongly heated before the fire, may suffice.

Enemata—Injections.

An enema is a liquid injected into the large intestines, through the rectum, by means of a suitable instrument. Injections are used for various purposes, and consist of different substances, chiefly as follows:—

1. **To Relieve the Bowels.**—Injections act, not simply by washing away the accumulated fæces, but by distending the rectum and promoting peristaltic action more or less through the whole intestinal canal. For this purpose a large quantity—one or two pints, or even more—should be slowly injected. After the introduction of the fluid the patient should lie down and retain the injection for ten or fifteen minutes. So large a quantity of fluid could scarcely be introduced or retained, except by patients who have previously used injections. As a general rule, the best fluid for injection is tepid water. Warm injections relieve pain or irritation, either in the bowel or in an adjacent organ—the bladder, the uterus, or even the kidneys.

2. **To Restrain Diarrhœa.**—For this purpose small injections only are necessary—one to two ounces; if copious enemata are used, the intestines are stimulated to contract and expel their contents. Starch water (tepid) is an excellent material for such a purpose; it should be made of the consistence of cream, and about two ounces used. In incurable cases, and when the Diarrhœa resists other means, a few drops of opium should be added to the starch. Starch injections are especially useful in acute, excessive, and dangerous Diarrhœa of Enteric fever, Dysentery, Phthisis, and the Choleraic Diarrhœa of Children.

3. **To Remove Thread-worms.**—For this purpose, half a pint to a pint of water, to which a dessert-spoonful of salt has been added, answers the purpose admirably (see Worms). In order that the water may be thrown as high up into the bowel as possible, a vaginal gum-elastic tube may be attached to the enema-syringe, and, after being well greased, gently pushed right up the bowel. Here, however, as in other cases, general treatment is necessary to correct the constitutional condition on which the disease depends.

4. **To Convey Nourishment.**—Injections are sometimes used to sustain the system, by introducing food up the rectum when it

cannot be taken by the stomach, as in acute Gastritis, obstinate vomiting, Cancer, etc. Beef-tea, soup, milk, the brandy-and-egg mixture, etc., may be administered in this way. It is necessary that the rectum should be empty before injecting nourishment. Medicinal substances are also sometimes administered by means of enemata. [For general use the Fountain syringe will be found superior to all others.]

Inhalation.

In its therapeutic sense, inhalation is the act of drawing air, impregnated with the watery vapor of medicinal substances, into the air-passages. It is an extremely useful mode of administering various remedies when their action is chiefly required on the mucous surfaces of the respiratory passages. Iodine, Sulphurous Acid, Phosphorus, Kreasote, Borax, Permanganate of Potash, Aconite, Hyoscyamus, Belladonna, Ipecacuanha, Carbolic Acid, etc., may be well given by inhalation in certain diseases chiefly involving the throat and large bronchial tubes, or in irritative or convulsive cough, or when there is fœtid expectoration. Quinsy, catarrhal or ulcerated Sore-throat, chronic Bronchitis, Phthisis, etc., may be more or less benefited by inhalation. The method of inhaling is very simple, and is often done quite effectively, and with less effort, without a special inhaler. All that is required is a jug of hot water, over which the face may be held, and a towel so arranged that it covers the face below the eyes, and surrounds the top of the jug, so as to confine the vapor. A few drops of the drug to be inhaled being dropped into the hot water, the medicine finds ready access to the air-passages through both the mouth and the nose. This may be practiced for five or ten minutes at bed-time, and if necessary, and the patient has not to be exposed to cold air during the day, it may be repeated once, twice, or oftener in the day. In acute inflammatory diseases of the throat, simple or medicated vapor may be administered as frequently as the patient's strength and other circumstances permit. A portion of the drug thus administered reaches the lungs and enters the general circulation; but the chief action of the medicated vapor is on the throat and bronchial mucous surface.

In some cases of inhalation, a new, clean, common clay smoking pipe may be employed. The bowl should be filled with sponge, or loose cotton, and a teaspoonful of the spirit to be inhaled poured in. The pipe is not to be lighted, but, by deep inspirations, the particles of spirit may be drawn through the tube into the air vessels of the lungs.

In grave prostrating diseases—Diphtheria, Croup, etc.—vapor may be inhaled by diffusing it through the apartment by the steam from a kettle with a long spout kept constantly boiling, or by forming a tent over the bed and covering it with blankets, and then bringing a pipe to convey the steam under it. In urgent cases, where suffocation is threatened, the room may be quickly filled with vapor by hanging wet towels before a large fire. In ordinary cases, simply keeping water boiling in the center of the room will moisten the atmosphere sufficiently.

Besides the administration of various remedies to the respiratory passages, the local application of the steam of hot water is very serviceable; it soothes the inflamed mucous membrane, aids expectoration from the lungs, and removes mucous from the crypts and follicles of the tonsils.

Inhalation can, however, be only a subordinate method of treatment in constitutional diseases, such as Consumption, and is chiefly palliative rather than curative. A well-chosen homœopathic remedy, administered in the usual way, just as certainly reaches the seat of the disease as anything inhaled can do, and at the same time tends to correct the constitutional error on which the local symptoms depend.

When the patient has to be exposed to cold air after inhalation, the vapor should be cold, and formed and distributed by the atomizer. This is an important precaution. In many cases in which it is desirable to use topical applications directly to a diseased part, this is the best method; the fluid may be injected or thrown as a fine spray, so as to be inhaled by the patient, by means of the atomizer. By breaking up the fluid into a very small spray, substances can be inhaled without inconvenience, and brought into direct contact with the bronchial tubes, even as far as their small ramifications.

Some Directions on Nursing.

The services of an intelligent, experienced nurse form a part of the treatment of the sick quite as essential as the administration of medicine. To aid her to some extent in the performance of this duty, the following general hints are offered. Particular instructions, suited to various diseased conditions, are given, when needful, throughout Part III., under "Accessory Treatment." In serious and difficult cases the medical attendant alone can furnish instructions adapted to the peculiarity of each case; and it is the nurse's duty faithfully to carry out his directions, and to report to him at each visit the effects of the treatment.

1. The Sick Room.—The following points should be kept in view: (1) The apartment should be airy. A spacious, well-ventilated room, allowing an uninterrupted admission of fresh air, and the free escape of tainted, is a valuable element in the management of the sick. Fresh air can only be insured by an open window or door, or both. It is generally desirable to have a fire kept burning night and day, both in summer and winter, as this assists ventilation; but the patient's head should be protected from it. During infectious diseases, besides diluting the poison with an abundance of atmospheric air, dilute Carbolic Acid, specially prepared for use in the sick-room, may be used as an efficient and agreeable disinfectant.* To the same end, the room should be divested of all superfluous furniture—carpets, bed-hangings, etc. (2) The room should be provided with a second bed or convenient couch, to which the patient should, if possible, be removed for a short time at least once in the twenty-four hours. This insures a change of atmosphere around the patient's body, and at the same time allows the bed to be aired. (3) The apartment should be darkened; not by excluding all light and air, by

*A solution should be frequently sprinkled about the floors, bedclothes, handkerchief, etc., and be diffused through the room by an atomizer: it acts quickly as an efficient disinfectant. It may also be used for personal disinfection a point often but indifferently carried out—by adding it to the water in which the patient is washed. It also makes an excellent gargle for fever patients to sweeten the breath. It is also useful to visitors of the sick, to prevent the risk from infectious diseases; for this purpose a few drops should be sprinkled on the handkerchief before entering the sick-room.

closed shutters, or closely drawn bed-curtains, but by shutting the window-blinds, and securing a subdued light, and by protecting the patient's face from the glare of gas, lamps, etc. (4) The sick-room should be quiet. Silk dresses and creaky boots, the crackling noise made by handling a newspaper, etc., often distress invalids; the tones of the voice should be gentle and subdued, but whispering avoided; all unnecessary conversation and noise must be forbidden. (5) The temperature of the room should be ascertained by a thermometer, as the sensations of the nurse cannot be depended upon as a sufficient guide; a thermometer, suspended out of a current of air and the direct heat of the fire, will correctly indicate the temperature of the room. The temperature may be varied according to the nature of the disease from which the patient suffers. In fevers, Inflammation of the Brain, etc., about 55 deg. will be the proper warmth. In Inflammation of the Lungs, and Bronchitis, a higher temperature is necessary—60 deg. and upwards. In all inflammatory affections of the chest, the air should be warm, and also moist (see "Inhalation"), so as not to irritate the inflamed lining of the air tubes. Cold air and too many bed-clothes are sure to increase the mischief. Under all circumstances it must be remembered that the temperature considered necessary is on no account to be maintained by excluding fresh air from the room, and making the patient breathe over and over again the air which has already been made impure. (6) Patients suffering from infectious diseases should be separated, if possible, and occupy a room on an upper story, to prevent the spread of the infection to others; for infectious exhalations, being lighter than air, ascend. Mothers who frequently go in and out of the room might keep a loose cotton gown hanging behind the door, ready to put on over their other dress whenever they enter it before waiting on the infected patient, and to be taken off again when leaving the room.

2. **Cleanliness.**—Fears are often expressed that in washing the surface of a patient's body, or even in changing his linen, any eruption or rash should be driven in, or that cold should be taken. If done properly, there is not the least ground for any such fear. The patient should be sponged over as completely as possible at least once a day with warm or cold water, as may be most agree-

able to his feelings, and then quickly but carefully dried with a soft towel. If the patient be much exhausted, a small part of the skin may be washed at one time; or, instead, first a damp and then a dry towel may be used under the bed-clothes, so as to disturb the patient as little as possible. See "Enteric Fever."

3. Beverages.—In most cases of illness, especially at the commencement, cold water, barley-water, gum-water, raspberry-vinegar-and-water, apple-water, toast-and-water, lemonade, or soda-water, are nearly all that are necessary. There is sometimes a foolish objection raised to allowing cold water to a patient; but it is not only most refreshing, but an agent of supreme importance, lowering excessive heat, giving vigor to the relaxed capillaries, and accelerating favorable changes. The quantity of cold water given at a time should be small—one to two tablespoonfuls—and repeated as often as desired. Sucking ice is useful and grateful.

4. Food Not to be Kept in the Sick-room.—Miss Nightingale's suggestion on this point is worth repetition here. It is this,—do not keep the food, drink, or delicacies intended for the patient in the sick-room or within his sight. The air and temperature of the apartment are liable to hasten putrefactive decomposition, especially in hot weather, and the continuous sight of them to cause disgust. Rather take up for him, at the fitting time, and by way of surprise, two or three teaspoonfuls of jelly, or as many fresh grapes as he may consume at once, or the segment of an orange. Or, if it be appropriate to his condition, a small cup of beef-tea, covered, with one or two narrow slips of toasted bread, just from the fire; this is very much preferable to offering even a less quantity from a dish that has been kept for many hours within reach of the patient's hand and eye.

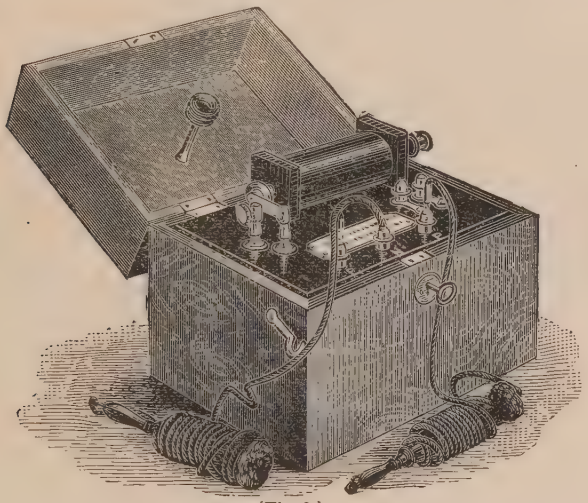
Electricity.

[Electricity has now a high rank as a curative agent with both the profession and the family.

There are two forms in common use: the Galvanic, or silent, or continuous current is used, and should be, more by the physician than by the layman, because of its power to affect vital parts, with comparatively little sensation.

The main use of this current is in various forms of Neuralgia, Spinal affections, Numbness, and Paralysis.

The Faradaic (Fig. 3), or induced, or buzzing noisy form, has been used for almost every known disease. Its use, however, is becoming more restricted as its real action is better understood.



(Fig. 3.)

It is an excellent general nerve tonic for persons debilitated through excessive mental work, worry, or dissipation of any kind.

It is very useful also to assist in regulating the circulation.

In muscular lameness or soreness, whether the result of a cold, a strain, or a bruise.

In various sprains.

In muscular Rheumatism, as well as sometimes in acute inflammatory and chronic articular Rheumatism.

In cases of Paralysis of almost any kind it is likely to be of some benefit and sometimes positively curative. Suppression of the menses from a cold or in Chlorosis may often be relieved by its use.

It is now recognized as one of the best means of treatment for opium or morphine poisoning—many physicians relying on it almost entirely.

It is of service in many cases of Goitre occurring in young girls.

Electricity should be used with great caution anywhere about

the head, more especially the forehead and temples and just back of the ears.

It should never be used in Cancer.

Massage.

Massage, which practically includes the various forms of rubbing, spatting, kneading the muscles, passive and active movements, etc., is becoming quite generally popular in the treatment of Nervous prostration, and in assisting the regaining of strength and nutrition in the course of convalescence from exhausting and debilitating diseases of any character.

In Paralysis it will help to keep the muscles from wasting, or assist in restoring them after they have commenced to waste.

It should never be used immediately before nor after eating; always allow an hour's time either way].

PART III.

DISEASES AND THEIR TREATMENT.

CHAPTER I

Small-pox.

["Small-pox is a continued infectious fever, attended with an eruption, and is caused by a specific zymotic poison."

It presents two varieties, the distinct and the confluent; the former is more mild and less dangerous than the latter; it is attended with less severe constitutional disturbance, having distinct pustules, which ordinarily are few in number, each being surrounded with a pale-red areola. In the confluent variety the pustules run together or coalesce, forming a uniform homogeneous swelling. The period of incubation lasts from ten to thirteen days, after which occurs the primary or initiatory fever, which continues about three days; this is followed by the stage of maturation, which lasts eight or nine days, and the secondary fever and decline of the eruption, which varies in length according to the severity of the disease.

As a rule, there are no symptoms during the period of incubation. Like most other fevers, the following symptoms appear in the first stage:—Chilliness, heat, headache; a thickly furred white tongue, a hard frequent pulse, a feeling of bruised pain all over the body, but especially in the back and loins; more or less pain and tenderness at the pit of the stomach, with vomiting. The pain in the back and the vomiting are the most characteristic

symptoms. On the third or fourth day the eruption appears, first on the face, neck and wrists, then on the body, finally on the lower extremities. The pimples at first are small and hard, feel like shot under the skin, gradually they increase in size until about the eighth day from the commencement of the fever; the contents are watery and transparent at first; but gradually change to yellowish matter as they ripen into pustules. These pustules are depressed in the centre, and surrounded by a rose-red areola; from the ninth to the eleventh day these pustules burst; the matter adhering to the surface forming crusts or scabs, that fall off in the course of four or five days, leaving depressed scars or pits.

In the confluent form of this disease, the initial symptoms are much more severe; the pustules are numerous, their outline irregular, forming large continuous suppurating surfaces; the severity of the disease bears a direct proportion to the amount of the eruption, and the danger arises chiefly from the large quantity of pustulation, especially if about the head and face.

The greatest danger to life is at the time of the secondary fever, from the ninth to the twelfth day, when the pustules are ripening, as the vital strength has already been much exhausted.

The importance of an early recognition of this disease can be readily appreciated. The severe pain in the small of the back is a marked symptom. It is sometimes necessary to differentiate between this disease and Measles.

In Small-pox the eruption is more perceptible to the touch, and is not distributed in crescentic patches as in that of Measles. The premonitory symptoms are essentially unlike. As distinguished from Chicken-pox, its eruption suppurates, and the fever is high, while in Chicken-pox the eruption is vesicular and the fever is mild. "There is no contagion so strong and sure as that of Small-pox; none that operates at so great a distance both of time and place." (*Watson.*)

Whenever it is known that any person is sick with this disease, or varioloid, which is the same, modified by vaccination, every one in the house should be vaccinated or revaccinated, no matter how recently this may have been done nor how mild the disease may appear. Even a mild case with little or no eruption, may initiate a malignant epidemic.]

Treatment.

Leading Indications:—*Aconitum.*—Shivering, heat, dryness of the skin, rapid pulse, swimming and pain in the head, nausea and vomiting, and pain in the back and loins; it may be used at any time during the course of the disease, when febrile symptoms are prominent. If there be much sickness with the fever, and a very rapid pulse, Veratrum Viride may be substituted for Acon.

Antimonium Tart. is specific for Small-pox, and should be administered as soon as the nature of the disease is ascertained; it is specially valuable during the eruptive stage; and also in the primary fever, if nausea and vomiting or convulsions should occur. Indeed, during nearly the whole course of the disease it may be given alone, or in alternation with any other remedy that is indicated. In favorable cases, if Acon. be given for the primary fever, and Sulph. during desquamation, to prevent after-effects, Ant.-Tart. is the only remedy required.

Belladonna.—Severe head symptoms, delirium, intolerance of light, etc.; a few doses will usually afford relief.

Mercurius.—Salivation, Ulcerated Throat, fœtid breath, or bloody Diarrhœa, especially during suppuration.

Apis.—Excessive swelling of the face, eyelids, etc.

Coffea.—Two or three doses, if there be restlessness and sleeplessness.

Camphor.—If the eruption suddenly disappear, or suddenly become malignant, with Dyspnœa, coldness of the skin, and symptoms of Paralysis of the Brain, two or three drops in a little tepid water, every ten or fifteen minutes, for several times till the skin becomes warm and the eruption reappears.

Opium.—Drowsiness and stupor and stertorous breathing.

Lachesis.—During the recent epidemic this medicine was found invaluable in those cases in which a typhoid condition ensued during the stage of maturation (probably due to absorption of pus).

Sulphur.—When the disease pursues an irregular course; when the eruption exhibits a tendency to disappear from the surface; when the pustules, instead of being transparent or yellow, are

green, purple, or black; when the blood with which they are filled announces a decomposition of this fluid, it is not to Arsenicum that we have recourse, but to Sulphur (*Teste*). During the formation of the pustules, and when there is furious itching, and when the disease is on the decline, it should be given as a preventive to the usual sequelæ, and continued till recovery is complete. Carbo Veg., Ac.-Nit., or Ars., under similar conditions, or when Sulph. only partially succeeds.

Diet.—Tea and dry toast, raw eggs beaten up with cold milk, beef-tea, etc., grapes, roasted apples, and wholesome ripe fruits in season. For drink, cold water is generally preferred, and any objection to it by nurses or friends should be firmly resisted; in addition, milk diluted with about one-third or one-half soda-water, lemonade, raspberry-vinegar-water, currant-jelly-water, and barley-water. For further hints on diet and beverages, see Part VI.

Accessory Treatment.

The following rules and regulations adopted by the Board of Health of the State of Illinois, in the winters of 1881—'82, for the treatment and prevention of Small-pox, are so practical and useful that we cannot do better than give them to our readers verbatim.

Sick-Room.—"The room selected for the sick should be large, easily ventilated, and as far from the living and sleeping rooms of other members of the family as it is practicable to have it. Everything not absolutely needed in the room should be removed. A free circulation of air should be admitted both by day and night. Place the bed as near as possible in the middle of the room, taking care, of course, that the patient shall not be in a draught. If the room connects with others which must be occupied, lock all but one door for entrance and exit, and fasten to the door frame—top, bottom and sides—sheets of cheap cotton cloth (which should be kept wet with thymol water or chloride of zinc solution—two drachms of chloride zinc to a half gallon of water) over the door to be used. The sheet must not be tacked at the bottom nor along the full length on the lock-side of the frame, but about five feet may be left free to be pushed aside; this sheet, however, must be long enough to allow ten or more inches to lie in folds on the

floor, and must also be kept wet with the disinfectant. All discharges from the nose and mouth of the patient should be received on rags and immediately burned, and the same precaution should be taken with the crusts as they fall off. Night-vessels should be kept supplied with a quart or so of copperas disinfectant, into which all discharges should be received. All spoons, dishes, etc., used or taken from the sick-room should be put in boiling water at once.

A pail or tub of the zinc disinfectant should be kept in the sick-room, and into this, all clothing, blankets, sheets, towels, etc., used about the patient or in the room, should be dropped, immediately after use, and before being removed from the room. They should then be well boiled as soon as practicable.

Not more than two persons—one of them, a skillful professional nurse, if possible,—should be employed in the sick-room, and their intercourse with other members of the family and with the public must be as much restricted as possible. All attendants should be revaccinated before taking charge of a small-pox patient. In the event that it becomes necessary for the attendant to go away from the house, a complete change of clothing should be made, using such as has not been exposed to infection; the hands, face and hair should be washed in thymol water, or chloride of zinc. Following this, free exposure to the open air should be secured before approaching any one.

Physicians and other necessary visitors, before entering the sick-room, should put on an outer garment, closely buttoned up, and a handkerchief or wrap about the throat and neck.

Such outer garment may be a linen duster or rubber overcoat; and this, together with the neck wrap, should be taken off in the open air immediately after leaving the sick-room, and either be dipped in the zinc disinfectant, or hung up in an out-of-the-way place exposed to the air until the next visit.

No inmate of the house, during the continuance of this disease, should venture into any public conveyance, or assemblage, or crowded building, such as a church or school; nor after its termination, until permission is given by the attending physician. Letters must not be sent from the patient, and all mail matter from the house should be subjected to a dry heat of 250-260

degrees F. Domestic animals, dogs, cats, etc., should not be allowed to enter the room of the patient. The privy should be thoroughly disinfected during the entire illness with the copperas disinfectant; three to five gallons of which should be thrown into the vault every three or four days. Water-closets should be disinfected by pouring a quart or so of this disinfectant into the receiver after each use.

After recovery has taken place, the patient should be bathed daily, for three or four days, in a weak disinfectant—the thymol water or a solution of zinc (two drachms of the salt to a half gallon of water). The head should be thoroughly shampooed during each bath, and the convalescent be then clothed in fresh clean garments that have been in no way exposed to the infected air. Patients should be kept in the house at least two weeks after the crusts have all disappeared.

In the event of death, the clothing in which the body is attired should be sprinkled with thymol water, the body wrapped in a disinfected cerecloth (a sheet thoroughly soaked in the zinc disinfectant, double strength), and placed in an air-tight coffin which is to remain in the sick-room until removed for burial. No public funeral must be allowed either at the house or church, and no more persons should be permitted to go to the cemetery than are necessary to inter the corpse.

After recovery or death, all articles worn by, or that have come in contact with, the patient, together with the room and all its contents, should be thoroughly disinfected by burning sulphur. To do this, have all windows, fire-places, flues, key-holes, doors and other openings securely closed by strips or sheets of paper pasted over them. Then place on the hearth or stove or on bricks set in a washtub containing an inch or so of water, an iron vessel of live coals, upon which throw three or four pounds of sulphur. All articles in the room, and others of every description that have been exposed to infection, which cannot be washed or subjected to dry heat, and are yet too valuable to be burned, must be spread out upon chairs or racks; mattrasses or spring beds set up so as to have both surfaces exposed; window-shades and curtains laid out at full length, and every effort made to secure thorough exposure to the sulphur fumes. The room should

then be kept tightly closed for twenty-four hours. After this fumigation,—which it will do no harm to repeat, the floor and woodwork should be washed with soap and hot water; the walls and ceiling whitewashed, or if papered, the paper should be removed. The articles which have been subjected to fumigation should be exposed for several days to sunshine and fresh air. If the carpet has unavoidably been allowed to remain on the floor during the illness, it should not be removed until after the fumigation; but must be taken up, beaten in the open air, and allowed to remain out of doors for a week or more. If not too valuable, it should be destroyed; but whenever practicable it should be removed from the room at the beginning of the illness.

After the above treatment has been thoroughly carried out, the doors and windows of the room should be kept open as much as possible for a week or two; when houses are isolated, articles may be exposed out of doors. Such articles of clothing, bedding, etc., as can be washed, should first be treated by dipping in the zinc disinfectant; they should then be immediately and thoroughly boiled. The ticking of beds and pillows used by the patients should be treated in the same manner, and the contents, if hair or feathers, should be thoroughly baked in an oven. If this cannot be done, they should be destroyed by fire, as should, in any event, all straw, husk, moss, or "excelsior filling."

Best disinfectants are, sunlight, fresh air, soap and water, thorough cleanliness—for general use. For special purposes the following are the most efficient, the simplest and the cheapest:

(1) *Copperas Disinfectant.*—Sulphate of iron (copperas), 1½ pounds; water, 1 gallon. A convenient way to prepare this, is to suspend a basket containing about sixty pounds of copperas in a barrel of water. The solution should be frequently and liberally used in cellars, privies, water-closets, etc.

(2) *Sulphur Disinfectant.*—Roll sulphur (brimstone), 2 pounds to a room ten feet square, and in the same proportion for larger rooms.

(3) *Zinc Disinfectant.*—Sulphate of zinc (white vitriol), 1½ pounds; common salt, ¾ of a pound; water, 6 gallons.

(4) *Thymol Water.*—Made by adding one tablespoonful of Spirits Thymol, to half a gallon of water. Spirits of Thymol is

composed of Thymol, one ounce; alcohol, 85 per cent., three ounces. It may be used instead of carbolic acid; it is quite as efficient and has an agreeable odor.

Vaccination.

[Vaccination is the process by which the disease known as the cow-pox is artificially introduced into the human system for the purpose of protecting it against small-pox.

In performing vaccinations the following are the chief points to be observed:

1. Condition of the Person to be Vaccinated.—Under ordinary circumstances the individual to be vaccinated should be in good health—that is, not suffering from some acute febrile disease, or intestinal and cutaneous affection.

Of course all rules are necessarily modified by circumstances; as for instance, a person has been exposed to the infection of small-pox; it is a plain duty to vaccinate in spite of any contra-indication.

The majority of all fatal cases from small-pox occur in the first year of life. A child a month or six weeks old is not too young to be vaccinated, when there is a prevalence of the disease.

As a rule the operation should be performed about the age of three months. Persons who have certainly been exposed to small-pox, should at once, without delay, be vaccinated; it may prevent the infection altogether; at all events, it will modify the development of small-pox. The incubative period of small pox is twelve days, while that of vaccinia to the stage of areola, is only nine. Therefore, if vaccination is performed any time within the first three days, it will have time to produce its protecting power.

2. The first essential of vaccination is good virus; the bovine is undoubtedly the best.

If liquid lymph be used, whether human or bovine, no preparation is necessary. If vaccine crust be preferred, it should be carefully reduced to powder and then made into a paste with water; if quill or ivory points are chosen, they should be moistened with a minute quantity of cold water.

The two most common methods of inserting the virus are by

puncture and scarification. For puncture, the operator will grasp the arm of the patient with his left hand in such a manner as to make the skin tense, near the insertion of the deltoid muscle; then a sharp, perfectly clean, well-charged lancet, should be introduced by puncture, from above downwards; the lancet should be held at an angle of about forty-five degrees; it is well to make a double puncture at each place, like this ‖.

Scarification is another method equally good, and possibly better. Draw the skin tense, remove the cuticle over a small space by scratches with a pointed instrument, just sufficient to make the blood appear; and then apply the virus. Another method is to make a number of single or double scratches, or closely set lines, and then make cross lines. The object desired is, that there shall be sufficient abrasion of the cuticle to thoroughly expose an absorbing surface.

The lymph then should be worked into the wound until dry; one place is as good as more, provided an equal amount of lymph is introduced into the system. Vaccina runs a certain typical course, and the various stages should be watched with care. The local signs indicating that the vaccination has taken effect, are first apparent on the third or fourth day after the operation, at which period there is a slight degree of elevation and hardness of the skin at the seat of the puncture, and a slight redness immediately surrounding it; on the fifth and sixth days a small quantity of liquor is effused beneath the epidermis, and a vesicle is formed with a depression at its centre; this vesicle goes on increasing in size until the ninth day, when it is perfectly developed; it then becomes flattened on the surface, and sometimes more convex than at the circumference; it is composed of numerous small cells, filled with lymph. This vesicle is surrounded by an inflamed areola; around this there is not infrequently a crop of small vesicles, and sometimes a rash comes out all over the body; this is exceptional. The tenth day the redness and heat have increased, and the movements of the arm are somewhat painful.

On the eleventh day the areola begins to diminish, and during the succeeding days it disappears more and more; the vesicle dries into a dark-brownish crust of an irregular form. At seven-

teen days after vaccination the crust is detached, leaving upon the skin a depressed cicatrix at the bottom of which are numerous small pits. This cicatrix is permanent for life.

In young children the arm should be protected, to prevent the crust from being detached too early.]

Typhus Fever.

Definition.—An acute specific form of fever, highly contagious and infectious, continuing from fourteen to twenty-one days, attended with a lethargic or confused condition of the intellect, and an eruption of a measles-like or mulberry appearance, and is the accompaniment of privation, over-crowding, and defective ventilation.

Symptoms.—The precursory stage varies, but is usually short, so that the patient yields to the disease within the first three days, giving up his employment and taking to his bed; in this respect strongly contrasting with the protracted invasive stage of Enteric. Sensations of uneasiness, soreness, or fatigue, loss of appetite, frontal headache, and disturbed sleep are the early symptoms. The patient is often seized with a rigor (but less marked and severe than in Small-pox or internal inflammations), usually succeeded by dry heat of the skin, thirst, quick pulse, white, dry, often tremulous tongue, scanty and highly-colored urine, sometimes vomiting, heavy look or stupor, prostration, and muscular pains; towards evening there is irritability or restlessness, and if sleep occurs it is unrefreshing, being disturbed by dreams or sudden starts.

The general appearance of a Typhus patient is very marked, and affords a ready means of diagnosis. "In an average attack the patient lies prostrate on his back, with a most weary and dull expression of face, his eyes heavy, and with some dusky flush spread uniformly over his cheeks. In the advanced stage of a severe attack he lies with his eyes shut or half-shut, moaning, and too prostrate to answer questions, to protrude his tongue, or to move himself in bed; or the mouth is clenched, the tongue and hands tremble, and the muscles are twitching and half rigid. The dryness of the mouth, the sordes on the teeth and lips, the hot, dry skin, and the deafness, or other symptoms which strike

an observer so immediately as to deserve to be included in the physiognomy of the disease."—*G. Buchanan, M.D.*

DIFFERENCES BETWEEN TYPHUS AND ENTERIC (TYPHOID) FEVER.

TYPHUS.	ENTERIC.
1.—Comes on quickly, after incubating about nine days.	1.—Commences slowly and insidiously, the period of incubation lasting about thirteen days.
2.—Occurs at any age	2.—Is most common in youth and childhood; rarely occurs after forty.
3.—Is rare among the wealthy classes, excepting doctors, students, and visiting clergymen.	3.—Is as common among the rich as the poor.
4.—The eruption is of a Mulberry color, comes out in a single crop about the fourth or fifth day, and lasts until the termination of the disease. The spots generally appear first on the extremities.	4.—The eruption consists of rose-colored spots, few in number, situated generally about the abdomen; comes in successive crops which in their turn fade and disappear.
5.—The brain is chiefly affected, and the bowels are often but little so; the abdomen is natural, and the evacuations dark, but never bloody. (These symptoms are occasionally reversed.)	5.—The bowels are chiefly affected, the evacuations being ochre-colored and watery, with congestion of the intestinal mucous membrane, sometimes hæmorrhage, or even ulceration, and the abdomen is tumid
6.—There is a dusky blush on the face, neck, and shoulders, injected eyes, and contracted pupils.	6.—The expression is bright, the hectic blush is limited to the cheeks, and the pupils are dilated.
7.—Runs its course in about a fortnight or three weeks.	7.—Continues at least four weeks, and often five or six, or even more.
8.—Relapses are of rare occurrence.	8.—Relapses frequently occur, especially in certain epidemics.
9.—The tendency to death is by Coma, or Congestion of the lungs.	9.—The tendency to death is by Asthenia, Pneumonia, Hæmorrhage, or Perforation of the intestine.
10.—Typhus arises from destitution and overcrowding, with defective ventilation, and spreads by contagion.	10.—Enteric arises from bad drainage and poisoned drinking water—as from a drain leaking into a well,—decomposing animal matter, etc., often with deficient rainfall, certain electrical conditions, or an insufficient supply of ozone.

During the first week the patient complains much of headache, noises in the ear, and, subsequently, deafness; the conjunctivæ are injected, the pupils contracted, eyes painfully sensitive to light, and therefore often closed. He becomes irritable, and his

answers short and fretful. After the lapse of a short period, usually between the fourth and eighth days, the mind passes from a state of excitement to one of delirium. This symptom is usually more severe, and appears earlier when the disease attacks persons in the upper classes of society, in consequence, no doubt, of the greater activity of their brains. This is especially the case with confusion of ideas as to time, place, persons, and even personal identity, with vague, rambling talk, of which occasionally he seems conscious, and from which he can be roused. Afterwards the delirium may become active and maniacal, or low and muttering. The patient often fancies that he is two or three persons, and the subject of a series of miseries and violence; confined in a dungeon, pursued by enemies from whom he vainly flies, or with whom he struggles; and he attempts to spring from bed to reach the door or window to fly from his tormentors. Sometimes the delirium passes into a heavy stupor, with tremulousness of the tongue and hands and twitching of the muscles (*subsultus tendinum*); but in favorable cases it subsides in two or three days. Improvement sometimes sets in quite suddenly. Between the thirteenth and seventeenth days the patient may fall into a long, deep, quiet sleep, awaking in twelve or more hours quite refreshed. The powers of the mind begin again to dawn, the countenance assumes a more tranquil aspect, sleep becomes natural, and at length convalescence is fully established.

Diarrhœa sometimes occurs, but at other times the bowels are confined, the evacuations are natural or dark (contrasting strongly with the yellow ochre color of the stools in Enteric fever), and may be involuntary.

The Pulse.—In Typhus the pulse is rarely less than 100, sometimes 120, 130, or even 140 in the minute. In the last case, however, in adults, it is indicative of great danger. As a rule, the pulse pursues a gradually increasing rate of frequency up to the ninth or twelfth day, and afterwards undergoes, in favorable cases, a somewhat sudden decline. Cases so marked almost invariably get well. On the other hand, departures from the gradual rise in the pulse, especially if considerable, mark the existence of complications or dangerous symptoms. In fatal cases of Typhus the pulse becomes more and more rapid, and also

weaker and smaller, up to the very hour of death. The first glimpse of dawning convalescence is afforded by watching the pulse (the temperature, as measured by the thermometer, is a valuable but less available sign), and whenever the pulse is fairly on the decline, especially if it becomes stronger and fuller, we may confidently conclude that the patient will recover. The crisis of Typhus is often indicated by no other symptoms than the fall of temperature indicated by the thermometer, and the decline of the pulse after having gradually reached its maximum degree of rapidity. There may be no marked perspiration, no critical diarrhœa, no striking alteration in the urine, or notable phenomena of any kind besides.

The Eruption.—The Typhus rash appears between the fourth and seventh days, and consists of irregular, slightly elevated spots, of a mulberry hue, which disappear on pressure, and may be singly scattered and minute, or numerous and large; in the latter case two or more spots coalesce. They are usually first seen on the abdomen, and afterwards on the chest and extremities. Murchison says the spots generally appear first on the extremities, especially the wrists and arms. From the first to the third day after the appearance of the rash no fresh spots appear; but each spot, although it undergoes certain changes, continues visible till the whole rash disappears and the disease terminates. The first three days the typhus spots are temporarily obliterated by the pressure of the finger, but after that time they are indelible, thus differing from enteric spots, which may be at any time momentarily obliterated by such pressure. In fatal cases the Typhus spots remain after death.

Odor.—The odor of Typhus patients is characteristic. It is offensive, pungent, and ammoniacal. Nurses familiar with Typhus are thus alone able to recognize it, and they estimate the amount of danger by the badness of the smell.

Nervous Symptoms.—It is from the constancy and prominence of these symptoms that the name of Typhus (stupor) was first employed; and it is almost certain that it is through the nervous system that the poison of the disease chiefly operates. Hence extreme restlessness, ringing noises in the ears, and low delirium or stupor, are invariably present to a greater or less

extent. In fatal cases, about the ninth or tenth day delirium merges into profound coma, or the condition described as *coma-vigil* may come on. In this latter condition the patient lies on his back with his eyes open, and certainly awake, but indifferent or insensible to everything transpiring around him. His mouth is partially open, his face expressionless, and he is incapable of being roused. The contents of the bladder and rectum are evacuated involuntarily. At length the breathing becomes nearly imperceptible, the pulse rapid and feeble, or it cannot be felt, and the transition from life to death occurs without any gleam of returning consciousness, and can only be recognized by the eyes losing their little lustre, and the chest no longer performing its slow and feeble movements.

Unfavorable Indications.—Early, furious, and persistent delirium, with complete sleeplessness; coma-vigil; convulsions; involuntary twitchings of the muscles of the face and arms; abundant and dark rash, nearly unaffected by pressure; great duskiness of the countenance, or lividity of the surface; involuntary, uncontrollable diarrhœa; suppression of urine, or Albuminuria; a brown, hard, tremulous tongue; a temperature gradually rising to 107 deg. Fahr., or higher; a great sudden elevation of temperature in the third week; a small, weak, irregular, or imperceptible pulse, stationary at above 120 deg.; bed-sores, inflammatory or erysipelatous swellings, and other complications; a strong presentiment of death on the part of the patient, etc. The prognosis is far more favorable in children from ten to fifteen years old, in whom the mortality is very small, than in patients over fifty, for then the mortality is very great.

Causes.—Overcrowding, with defective ventilation, destitution, and want of personal and domestic cleanliness. Hence it is the scourge of the poor inhabitants of our large towns. Overcrowding includes too many occupants in rooms, and also building dwelling-houses upon too circumscribed an area, preventing the proper ventilation of streets and houses. A spacious dwelling, with free ventilation, robs the disease of half its power, and the danger of its spread to others is reduced to a minimum. Privation—famine through failure of crops, commercial distress, strikes, hardships in war, etc.—predisposes to Typhus by deteriorating the

constitution. Before the days of Howard, Typhus was never absent from our prisons and hospitals; it was the scourge of the armies of the first Napoleon, and it decimated those of the Allies in the Crimea, the disease varying among the troops exactly in proportion to the degree of privation and overcrowding. In 1818, and again in 1847, the failure of the potato crop in Ireland gave rise to an epidemic of this fever, so that it is estimated that one-eighth of the entire population was attacked. Dirty dwellings, filthy clothes, and personal squalor constitute favoring attendants of the disease. There is undoubted evidence that the poison of Typhus may be generated *de novo:* the circumstances under which this occurs are stated above. There seems ground for believing that the poison is chiefly transmitted by the exhalations from the lungs and skin; this poison being inhaled or swallowed, finds ready access to the blood, upon which it exerts its morbid influence.

Treatment.—It is a question whether Typhus can ever be cut short, or the definite course of the disease altered by the administration of remedies; some contend that it may be broken up in the first stage, especially by the combination of homœopathic remedies and hydropathic appliances; others believe that the disease must have its course. However, our experience amply proves that in the great majority of cases the violence of the symptoms can be held in check, the patient's comfort greatly promoted, and convalescence hastened, by judicious treatment.

Special Indications. — *Aconitum.* — Thickly-furred tongue, foul taste, thirst; heavy, aching pain in the head; soreness and heaviness in the bowels and other parts of the body; exacerbations towards evening; the urine becomes dark and foul; the patient is restless, depressed in spirits, wakeful or drowsy, and dreams heavily in sleep. Acon. is of great service in the first stage, before the brain is much involved, and when severe febrile disturbance is present; but not afterwards, probably, except as an intercurrent remedy, and for inflammation or local congestion.

Gelsemium—Is specifically indicated when, from some great excitement or over-exertion, a typhoid state suddenly supervenes; with prostration of all the vital forces, and the patient experiences strange sensations in the head, with morbid condition of the

motor nerves, manifested by local paralysis, or jactitation of certain muscles. (*Hale.*)

Baptisia.—Should typhoid symptoms appear, and there be difficulty in determining the exact nature of the disease, this remedy should be at once administered, and repeated several times. If improvement does not follow in a reasonable time, another remedy should be chosen.

Hyoscyamus.—Severe pains in the head; dull, distressed, or haggard expression of the face; dry and glazed brown tongue; sordes on the teeth, noises in the ears, deafness, and aberration of sight—the patient seeing double or treble; delirium, in which the patient frequently manifests a desire to escape from some imaginary enemy or evil. Hyos. is probably one of the best remedies in this disease.

Belladonna.—Great cerebral congestion,—bright-red, even bloated face; throbbing of the temples and carotids; glistening and staring of the eyes; partial loss of the use of the tongue, so that the patient can scarcely articulate; much thirst; confusion of ideas; picking at the bed-clothes; furious delirium.

Opium.—Stertorous breathing; low muttering delirium; stupor; dark-red face; hot and dry, or clammy skin; thick brownish-coated tongue; complaint of thirst (if the patient can express his sensations).

Ac.-Muriat.—In an advanced stage this acid is sometimes capable of effecting a most beneficial influence; especially when there are,—complete loss of muscular power; extreme dryness and parched appearance of the skin, which is cold; quick, feeble pulse; low delirium; slavering; foul exhalations from the ulcerated throat. [Sliding down in bed is a marked symptom.]

Rhus-tox.—Blackish-brown mucus on the tongue; thirst; bleeding from the nose; discharge of fœtid urine; involuntary, bad-smelling alvine evacuations; small and rapid pulse; stupor.

Arsenicum.—Sunken countenance and eyes; dry, cracked tongue; burning thirst; involuntary diarrhœa.

Nitric Acid.—This remedy has often a very salutary effect, and may be given occasionally throughout the disease.

Accessory Measures.—The points of greatest importance may be briefly summed up as follows: (1) The patient should be

placed in a large, or at least in a well-ventilated room, so as to secure a continuous and ample supply of fresh air. Cases occurring in close, crowded rooms, in which this prime hygienic condition cannot be secured, should be removed to a suitable place. (2) Frequent changes of personal and bed-linen, and changes of posture to avoid congestion and bed-sores. Directly there is the least indication of a bed-sore, the part should be coated over with a layer of flexible collodion. (3) The wet-pack (see page 44) is a valuable measure, especially early in the disease, and when the skin is dry and hot. (4) Food or beverages should be given in small quantities at regular and frequent intervals, including water, milk-and-water, tea, broth, and beef-tea. It is extremely important that, from the first, nourishment should be given regularly and persistently. The tendency to death is by Asthenia; and keeping that in mind, the patient should be frequently supplied with small quantities of very nutritious food. If prostration, feeble and irregular circulation, or complications indicate it, wine or brandy. In some cases in which patients obstinately refuse all food, or are unable to swallow, life is often saved by nutritious or stimulating enemata. (5) Quiet, in noisy streets stuffing the ears with cotton-wool; cleanliness; sponging the whole surface of the body [tepid water] and carefully drying at least once a day; and intelligent and unremitting watching. In no disease is careful nursing more necessary. See also the hints on nursing fever-patients in the following section, and the general measures described in Part II.

Preventives.—As disinfectants—fresh air, efficient ventilation, and cleanliness are of paramount importance. As additional means for avoiding contagion, but by no means as substitutes—white-washing with quick-lime, washing the woodwork with soap and water, repapering or calsomining infected rooms, cleansing the linen in water to which chloride of lime has been added, and the use of Carbolic Acid in the water employed in sponging the patient,—five drops of pure acid to a quart of water. Without cleanliness and fresh air, vinegar, camphor, and other so-called preventives are useless, and only disguise noxious vapors. Persons in attendance on the sick should especially avoid the breath and the exhalations which arise on turning down the bed-clothes, as

there is reason to believe that the poison of Typhus is mainly thrown off by the lungs and the skin. The volatile exhalations from these surfaces have the odor before described, and if not largely diluted by fresh moving air are extremely poisonous. Nurses should not be overworked, deprived of repose in bed, nor of daily out-of-door exercise. If there is any ground to fear an attack of Typhus, Hyos. and Bapt. are probably the best preventives, with plenty of fresh air and wholesome food.

Enteric Fever—Typhoid Fever—Gastric Fever.

Definition.—Enteric fever (so called from its chief pathological effects being evident in the bowels) is a continued, slightly infectious fever lasting about twenty-eight days, often longer, with an eruption of a few rose-colored dots on the chest, abdomen, or back, and attended with great feebleness, abdominal pains or tenderness, and diarrhœa, which increase with the disease, the discharges being copious, liquid, of a light-ochre color, putrid, and often containing altered blood.

The word Typhoid signifies similarity to Typhus; but although the two fevers have many symptoms in common, Enteric is an essentially different disease, and there are several considerations which render it important to be able early to identify the variety we may be called upon to treat. Thus the causes of these fevers are different, and suggest sanitary regulations of an opposite nature. Enteric is less contagious than Typhus; the tendency to a fatal issue varying, the treatment must be regulated accordingly; and, further, if not early recognized, patients may persist in their usual occupations at a time when rest in bed would conserve the strength and moderate the progress of the disease. For the easy recognition of these fevers, we have given in a tabular form the chief differences on page 67.

Cause.—The poison of Enteric fever, according to Budd, Aitken, and others, does not originate in decomposing sewage, but is transmitted by the specific poison contained in the discharges from the bowels of the person infected with the fever, by percolating the soil into the wells which furnish drinking water, or by infecting the air through defective sewers or water-closets. To this hypothesis Murchison makes the following objections:—(1) There

are many facts which show that Enteric fever often arises from bad drainage independent of any transmission from the sick. The danger arises when the drain becomes choked up, so that the sewage stagnates and ferments, and the transmission of the poison to a distance is impeded or arrested. (2) There are numerous instances of Enteric fever appearing in houses having no communication by drain with any other dwelling. (3) There is no evidence that the stools of Enteric fever are of such a virulent nature as has been stated. The attendants on the sick are rarely attacked. (Drs. Parkes and Wilson notwithstanding maintain that there is abundant evidence of the disease being so contracted.) (4) The fact that the prevalence of the disease is influenced by temperature is opposed to the idea that it depends on a specific poison derived from the sick; but is readily accounted for on the supposition that the poison is generated by fermentation or decomposition.

It is unnecessary here to discuss the question whether the poison of Enteric fever is sometimes generated anew by the decomposition of sewage-matter, or whether every case of this fever owes its origin to an ancestrally-descended and far-wandering germ, which has found an entrance, by some secret or obvious means, into the sewer or cesspool which is to form the nidus of the poison. The point is not sufficiently practical (although highly interesting) for exhaustive discussion in this work. The question that most concerns us is (whether of primeval origin or spontaneously generated by the putrescence of sewage), that the poison of Enteric fever is propagated by sewage and by sewage only, by its particles and gaseous emanations borne to us in air, or by those same particles dissolved in and polluting our drinking-water. That the poison is thus conveyed all are agreed, and therefore all alike concur in the necessity for eliminating the poison from our air, our water, and our milk.

The chief sources of water pollution, then, are the following:—(1) Surface wells which are supplied with water filtered through cesspools or adjacent churchyards, the nitrates of the soil imparting to the water deceptive sparkling and pleasant qualities; (2) the connecting of drinking-water cisterns with the soil-pipe, or the sewer by a water-pipe, which also serves as an air shaft by which the sewer gases rise into, and are dissolved by, the water which

we are about to drink; (3) the pollution of the air of our houses by sewage products through openings delusively "trapped," but which pour their gases slowly into our chambers, which, by the rarefaction of the atmosphere, in winter especially, suck them in with great force. Extra fires and lights in the winter season, when outer doors and windows are closed, form a sort of pump, lessening the pressure upon the water-traps or the house-drain, and bring up the products of decomposition from the sewers. We too readily take for granted that the traps are air-tight and do not allow the gases to find ingress to our apartments.

Symptoms.—These may be divided into (1) those of the accession, and (2) those of the three weekly periods.

Unless the poison is very concentrated, there is a period of incubation, varying from seven to fourteen days, after which the disease sets in slowly and insidiously. The patient becomes languid and indisposed to exertion; is chilly and unwilling to leave the fire; the back aches and the legs tremble; the appetite fails, and there are even nausea and sickness; the tongue is white, the breath offensive, and often the throat is sore; the bowels are generally relaxed; the pulse is quickened, and the sleep disturbed. These symptoms gradually increasing, the patient has probably rigors, succeeded by heightened temperature, severe headache, and such muscular debility that he takes to his bed. This is the accession. The course of the fever may now be divided into three weekly periods (*Watson*).

First Week.—The prominent symptoms are,—vascular excitement and nervous oppression, including a bounding pulse, 90 per minute, great heat of skin, thirst, and obscured mental faculties; the patient cannot give a coherent account of himself, complains of little except his head, and is usually delirious at night. The abdomen enlarges, is resonant on percussion, and there is tenderness or even pain on firm pressure, especially in the right *iliac fossa*, near the termination of the small intestine, where a peculiar gurgling sensation is conveyed to the fingers on pressure, arising from the mixing of the gastric fluids.

Second Week.—Debility and emaciation become very marked, the muscles wasting as well as the fat; the urine is scanty and heavy, being loaded with urea from wasting of the nitrogenized

tissues. During the second week there is also frequently diarrhœa, which generally increases to five, six, or even more evacuations in twenty-four hours. The specific characters of the evacuations are the following:—Fluidity; pale ochre or drab color; sickly putrid odor; absence of bile; and a flocculent debris of disintegrated glands of the *ileum*. This debris may be discovered by washing the discharges. It is also worth notice that often before a patient takes to his bed, or looseness of the bowels sets in, the fæces are of a light-ochre color, and furnish the most marked of the early signs of Enteric fever.

Third Week.—The debility and emaciation become extreme, the patient lies extended on his back, sinking towards the foot of the bed, without making an effort to change or preserve his position. There is a bright and pinkish flush of the cheeks, which strongly contrasts with the surrounding pale skin; sordes occur on the mucous membrane of the mouth and lips; the tongue is dry and brown, or red and glazed, and often rough and stiff, like old leather; the urine is frequently retained from inaction of the bladder; the fæces pass without control, the tendons start from irregular, feeble contractions of the muscles; the patient picks vacantly at the bed-clothes, or grasps at black spots, like flies on the wing (*muscæ volitantes*), which appear before his eyes; he becomes deaf, no longer knows his friends, and on recovery will have little or no remembrance of anything that has at this time occurred, and in all probability his intellectual powers will be impaired for some time after convalescence.

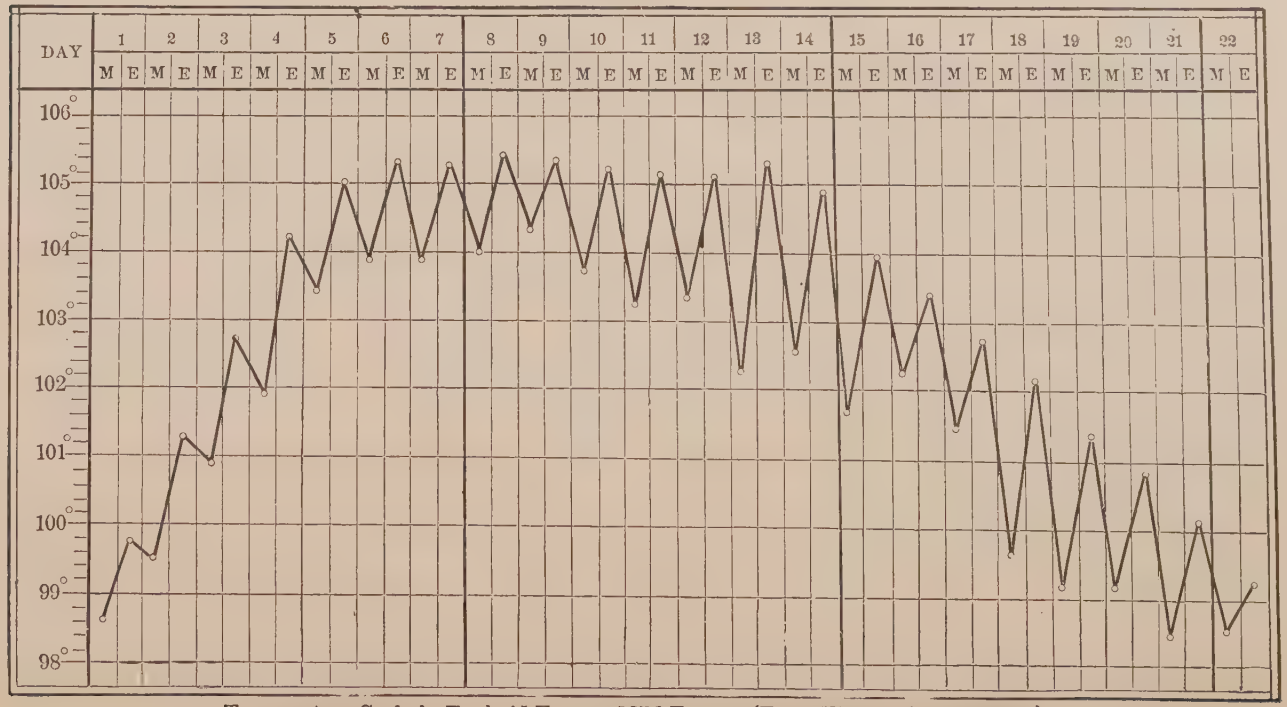
In the majority of fatal cases, death occurs about the end of the third week; and it is a notable fact that there seems to be no relation between the general symptoms and the ultimate issue, rendering the disease one of great uncertainty and perplexity.

The Eruption.—From the seventh to the fourteenth day, the characteristic eruption generally begins to show itself, chiefly on the sternum and epigastrium, in the form of rose-colored dots, which are few in number, round, scarcely elevated, and insensibly fade into the natural hue of the surrounding skin. The quantity of the rash bears no proportion to the severity of the disease. This successive daily eruption, disappearing on pressure, each spot continuing visible for three or four days only, is peculiar to,

and absolutely diagnostic of, Typhoid fever." (*Aitken.*) The first crop of the eruption is rarely fully conclusive, but successive crops, even of not more than two or three spots each, remove all doubt. Although the rose-colored rash is never met with in any other disease, yet we have treated cases of Enteric fever without being able to detect a single spot. Occasionally, also, very minute vesicles appear, looking like drops of sweat (*sudamina*), chiefly on the neck, chest, or abdomen.

Temperature.—The information afforded by the clinical thermometer in the diagnosis of Enteric fever is very important. In all the acute specific fevers the temperature is abnormally raised; in this, elevation is gradual, while in most others it is abrupt. During the first three or four days we have scarcely any symptoms to indicate the invasion of so serious a disease except the gradual elevation of the temperature; but if, on the fourth or fifth day, the maximum temperature attained during the twenty-four hours be not 103·5 or 104 deg., the disease is most probably not Enteric fever. And, further, if on the first or second day the maximum temperature reaches 104 deg., the disease is some other acute fever, as the temperature only gradually attains such a degree in Enteric fever. At the commencement, the diagnosis is difficult, inasmuch as the characteristic rash does not usually appear before the sixth, sometimes not till the twelfth, day of the disease; and, indeed, in children, cannot sometimes be observed at any stage. Temperature is also an important element in the prognosis. Thus we have great variations in the temperature in Enteric fever, being low in the morning, and attaining its maximum degree in the evening. The greater these fluctuations at the end of the second week, the more favorable is the attack, and the shorter will be its duration. If the temperature falls considerably in the morning, even though the evening rise is considerable, the prognosis is favorable. On the other hand, should the temperature during the second week remain continuously high, we may predicate a severe and prolonged attack. Again, probably the first indication of improvement in cases of persistent elevation of the temperature is a decline in the morning temperature. When such a decline occurs, especially if it be repeated on subsequent days, even though the maximum tempera-

FIG 4.



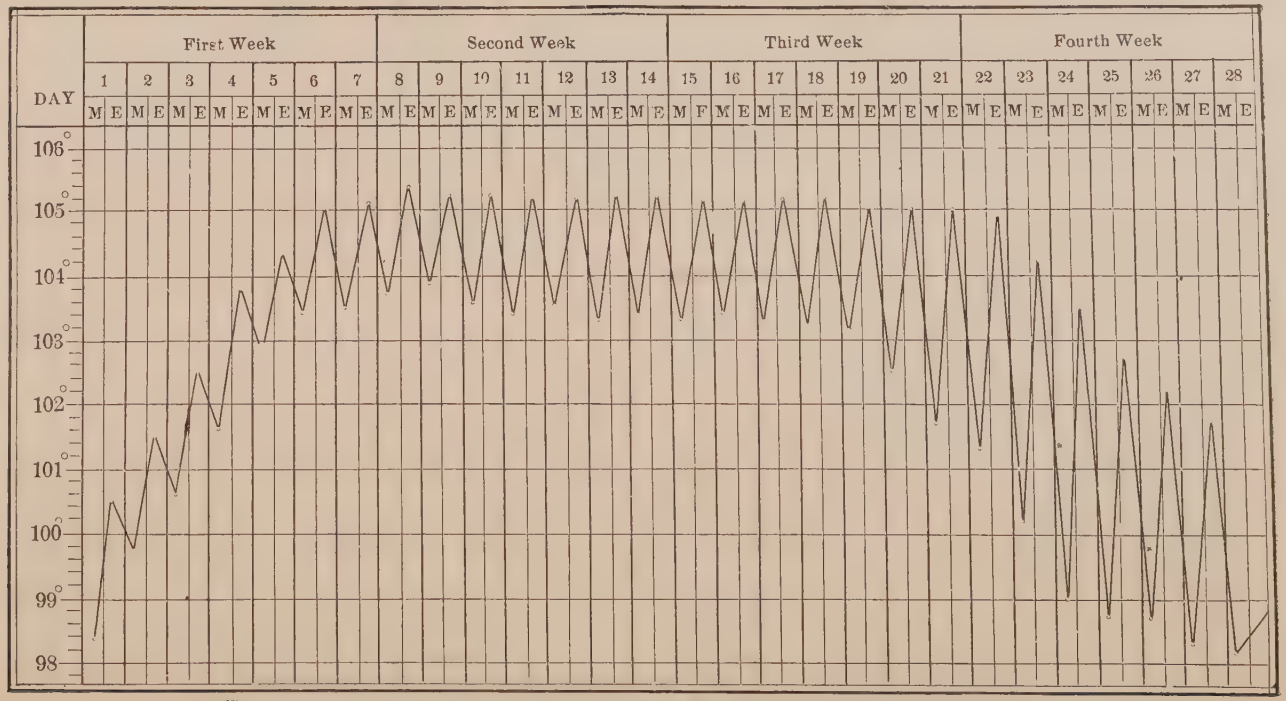
Temperature Cycle in Typhoid Fever.—Mild Form.—(From Kippax "On Fevers.")

ture reached in the evening remain the same, we may be certain that the fever has begun to abate. It is true a sudden fall in the temperature may be consequent on Diarrhœa and Hæmorrhage—probably the latter when it takes place suddenly; but, usually, other symptoms would indicate such an occurrence. Unlike Typhus, the decline in the temperature is generally gradual. (See Temperature Charts, figs. 4 and 5, pp. 79 and 81.)

Dangers.—(1) *Hæmorrhage.*—This may occur from the ulcerated patches in the *ileum*, during the separation of the gland-sloughs, and may be either capillary or from the opening of a large vessel. The discharge of blood may be so great as to be immediately fatal by swooning, or it may be remotely fatal, by exhausting the patient so that he has no power to bear up against the fever in its subsequent course. Sometimes, without any escape of blood from the orifice of the bowel, the patient becomes suddenly blanched and dies in a swoon. In such a case a *post-mortem* examination finds the intestines distended with clotted blood. (2) *Exhaustion* from profuse and persistent Diarrhœa, in cases in which the affection of the mucous membrane has been very severe and obstinate. (3) *Perforation.*—The ulceration may extend till the coats of the bowel are perforated, and cause fatal Peritonitis: this may happen during the second or third week, or, more frequently, during prolonged and imperfect convalescence. The symptoms of this occurrence are,—a sudden pain and tenderness in the abdomen, with swelling, more or less nausea and vomiting, an altered expression of the features, and death in one or two days. (4) *Congestion.*—The lungs may become congested, giving rise to Bronchitis, Pleurisy with effusion, or Pneumonia; or latent tubercle may be called into fatal activity; in short, there is a tendency to congestion in the three great visceral cavities—the head, the chest, and the abdomen. (5) *Relapse.*—This is not unlikely to occur from inattention to diet, or from abandoning the recumbent posture too soon.

It will be inferred from the preceding observations that this disease does not run a uniform course; indeed, cases have been recorded in which a fatal termination has been reached without the manifestation of any characteristic symptom. In our practice we have met with the greatest conceivable varieties, so that

Fig. 5.


First Week
Second Week
Third Week
Fourth Week
DAY
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28
M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E M E
106°
105°
104°
103°
102°
101°
100°
99°
98

Temperature Cycle in Typhoid Fever.—Severe Form.—From Kippax "On Fevers."

Enteric fever may be said to present, in the mode of its accession, in the course, gravity, and termination of the symptoms, so many forms, complications, and accidents, as to justify its being considered an epitome of the whole practice of medicine.

Treatment.—Unless distance absolutely forbids it, the treatment of this disease should only be confided to a medical man.

Special Indications.—*Baptisia.*—As soon as Enteric fever is suspected, this remedy should be administered, one or two drops of lx dil., or of the strong tincture, every two or three hours. This remedy is of great value, modifying, and even cutting short, the attack by destroying the poison in the blood. Its influence in this disease is comparable to that of Acon. in simple fever; but Acon. exercises little or no curative power in Enteric fever, which depends on the presence of a specific blood-poison, and requires the action of an antidote. Should, however, the administration of Bapt. have been much delayed, and the specific poisonous effects produced, other remedies must be resorted to; especially Ars. and Rhus. Baptisia may be justly considered our sheet anchor in the treatment of typhoid fever during the first week. For it is capable of exciting a fever resembling that of typhoid, and of producing congestion and catarrhal inflammation of the intestinal mucous membrane, with abdominal tenderness and diarrhœa, the pathological condition present during this period. The soft and full, yet quick pulse, the headache and tendency to delirium, the despair of cure, the fœtid breath, the soreness all over, and the intolerance of pressure on lying are marked symptoms. It is best indicated in that type which is characterized by extreme depression of vitality. And if administered early, it will considerably abate its energy. When the disease is prevailing as an endemic, Baptisia, first dil., administered morning and evening, often acts as a preventive by rendering the system less susceptible to the morbific agent. (Lecture on Fevers, by J. R. Kippax, M. D. 1883; Gross & Delbridge.)

Arsenicum.—Frequent, copious Diarrhœa, which may become involuntary, of a drab or ochre-colored evacuations; enlargement, sensitiveness, and gurgling of the abdomen; excessive prostration; thirst; nearly imperceptible, intermittent pulse. This remedy is of priceless value, and its administration should be persevered

in even in the most disheartening cases. It may be alternated with

Carbo Veg.—Offensive smells from the patient, fœtid evacuations; also cold extremities; cold sweats, and rapid sinking.

Mercurius.—Greenish or yellowish evacuations, but less serious Diarrhœa than described under the previous medicines; thickly-coated tongue; copious perspiration.

Belladonna, etc.—When the brain is much involved, Bell., Hyos., or Opi. is required. These remedies may be administered by inhalation from boiling water to which a few drops of strong tincture have been added. (See Sec. on Typhus fever.)

Terebinthina.—Hæmorrhage from the bowels, and retention of urine.

Acid.-Muriat. — Great nervous depression; stupor; sinking down in the bed; putrid sore throat, etc. It probably ranks next to Ars. in the gravest symptoms of low fever. For the throat it may also be used locally. Ac.-Nit. may also be of service in similar conditions.

Acid.-Phos. — Milder forms of Typhoid, especially for the nervous prostration; also after the severity of a bad attack has been moderated by other remedies.

Sequelæ.—During convalescence various affections are liable to arise, such as troublesome Cough, Indigestion, Headache, Deafness, etc. For these it is only necessary to suggest such remedies as are elsewhere prescribed. For brain-symptoms, Bell., Hyos., Zinc., Opi., Rhus.; for chest-symptoms, Phos., Bry., Iod.; for Indigestion, Nux V., Carbo V., Ign., Merc. Deafness usually disappears with the general nervous prostration, under the use of Ac.-Phos., China, or Chin-Sulph. China also moderates the excessive hunger often experienced during convalescence, and is especially useful if there has been much waste of the fluids of the body. Lastly, Sulphur aids the recuperative effects of nature, and may be administered for some time after the more specific remedies are discontinued.

Accessory Measures.—The following points require special attention in nursing fever-patients; the reader is, however, requested to study the more detailed hints on nursing the sick (page 52), and the various accessory measures that are described

in Part II. Persons having the charge of extreme cases of illness should be familiar with the several accessories there indicated, as their efficient carrying out is second only to the administration of medicine.

1. *The Apartment.*—The patient should, if possible, be placed in a large, well-ventilated apartment, provided with a window, door, and fireplace, so contrived as to allow of an uninterrupted admission of fresh air and the escape of tainted air. A blazing fire also assists ventilation. The room should be divested of carpets, bed-hangings, and all unnecessary furniture. A second bed or convenient couch should be provided, so that, by removing the patient to it for a few hours every day, the fever atmosphere around his body may be changed. The light from the window may be subdued, and noise and unnecessary talking forbidden.

2. *Rest.*—The patient should be but little disturbed, and enjoy complete physical and mental rest during the whole course of the disease. The importance of this is proved by the *post-mortem* examinations, which often show vigorous attempts on the part of neighboring structures to limit, by union and adhesion, the results of perforation, obviously indicating the necessity of absolute rest throughout the disease (*Aitken*). Any efforts made when the ulcers in the *ileum* are healing might affect that progress unfavorably and even re-excite that morbid action which ends in perforation.

3. *Cleanliness.*—The body and the bed linen, including the blankets, should be frequently changed, and all matters discharged from the patient immediately removed. The mouth should be frequently wiped out with a soft, wet towel, to remove the sordes which gather there in severe forms of fever. The water may contain a little of Perfumed Carbolic Acid. The patient's body should be sponged over as completely as possible at suitable intervals with tepid or cold water, as may be most agreeable to his feelings, and quickly dried with a soft towel. If necessary, the sponging may be done piece by piece, to avoid fatigue. Carbolic Acid may be added to the water—three or four drops of the pure acid to a quart of water. Sponging the whole surface of the body with cold or tepid water should never be omitted in fever; it reduces the excessive heat, soothes the uneasy

sensations, and is indispensable in maintaining the cleanliness which is so desirable in the sick room. Water thus applied acts as a tonic, giving tone to the relaxed capillaries, in which the morbid action goes on. Frequent washing with soap and water also tends to prevent bed-sores, by keeping the skin in a healthy condition. If bed-sores have formed, they should be protected by Arnica or Calendula plaster.

4. *Hydropathic Applications.*—In addition to the sponging and washing just recommended, we have found the abdominal wet-compress of great utility. (See p. 45.) It tends to diminish excessive Diarrhœa, checks the spread of ulceration of the *ileum*, and obviates perforation. Should lung complications arise, the compress should be applied to the chest as well as the abdomen. During the early course of the fever, the wet-pack, described p. 44, is an invaluable application, and tends to give a mild character to the disease.

5. *Beverages.*—At the commencement of the fever, pure water, toast-and-water, gum-water slightly sweetened (one ounce of gum-arabic, half an ounce of loaf sugar, one pint of hot water), barley-water, lemonade, or soda-water, is nearly all that is necessary. Cold water is an agent of supreme importance: it lowers the excessive temperature, and proves a valuable adjunct to the medicines prescribed.

6. *Diet and Stimulants.*—In a disease which lasts three or four weeks, sometimes five or six, in which the waste of tissue is great, and when common food cannot be taken, it is a point of high importance to supply the patient with appropriate nourishment; otherwise he may sink before the disease has completed its course. The following are points requiring attention. Patients are often unable to swallow or relish nourishment in consequence of the dry and shrivelled state of the tongue, when it will be found necessary to soften the mucous lining by putting a little lemon-juice and water, or other acceptable fluid, into the mouth a few minutes before food is taken. All the aliments given should combine both food and drink in a fluid or semi-fluid form, until recovery has fully set in. The digestive functions being more or less completely suspended, the nourishment given must be only such as requires the simplest processes for its assimilation. The

following are examples of this form of nutriment:—Milk (a most important article in the treatment of fever-patients), iced-milk; thin arrow-root with milk; wine-whey, prepared by adding half a pint of good sherry to one pint of boiling milk, and straining after coagulation; blancmange of isinglass or ground rice (not gelatine); yolk-of-egg, beaten up with a little brandy, wine, tea, cocoa, or milk; beef-tea and animal broths (a little thickened with well-cooked, old rice, vermicelli, isinglass, or a few crumbs of bread); and in some cases alcoholic drinks. The addition of two or three grains of pepsin to each cupful of milk or broth facilitates its digestion. Fruits are generally inadmissible.

A little good wine with an equal quantity of water may be given every hour or two, according to the requirements of individual cases. Effervescent wines must be avoided. But the effects of the wine or brandy should be carefully watched by the medical attendant and only given in proportion to the demands of the system, the bulk and force of the pulse being the main guides. Except in small quantities, stimulants are not required by children, nor by persons who can take a sufficient quantity of other kinds of nourishment, nor early in the disease. On the other hand, aged persons, and patients greatly prostrated, or with cold extremities and livid surface, almost invariably require alcoholic stimulants. Under any circumstances, if stimulants aggravate existing symptoms, their employment should be modified or altogether discontinued.

Further nourishment should be given with strict regularity; in extreme and long-continued cases of prostration, every one or two hours, or even oftener, both day and night. Frequently the functions of digestion and assimilation are so greatly impaired that the largest quantity of nourishment must be given to sustain the patient till the disease has passed through its stages. Dr. Graves was so strongly impressed with the importance of nourishment in fevers as to have said that he desired no other epitaph than that he fed fevers.

7. *Watching Patients.*—Fever patients should be attended and watched day and night. Their urgent and incessant wants require this, and their safety demands it. Instances have occurred of patients, in the delirium which so frequently attends severe fever

getting out of bed, and even out of the window, during the absence of the nurse, and losing their lives from injuries thus sustained.

8. *Moderation in Convalescence.*—Food should only be allowed in moderation, and never to the capacity of the appetite, till the tongue is quite clean and moist, and the temperature, pulse and skin have become natural. In Enteric fever, and in other conditions in which the bowels have been inflamed, this caution is especially necessary during convalescence. Solid food should not be given till the temperature of the patient in the morning and evening has remained, at least for two days, at about the natural point—98–99 deg. F. The tongue may be moist and clean, and the appetite vigorous, but the Enteric ulcer yet unhealed. If the thermometer shows an evening temperature of about 101 deg. F., with a morning temperature one or two degrees lower, solid meat might be sufficient to induce fresh irritation of the unhealed ulcer, fatal hæmorrhage, or perforation. Not until the evening temperature has remained, for at least two successive days, below 99 deg. F., can we be certain that the ulcers have healed, and that solid food may be allowed without risk. We have known solid meat given too early bring back the most severe features of the disease. If stimulants have been given, they should be gradually withdrawn as the quantity of nutritious food is increased. Even when convalescence has somewhat advanced, moderation should still be exercised, as the appetite is often excessively craving.

9. *Change of Air.*—The salutary influence of change of climate and scene to persons who have suffered from a serious attack of fever can scarcely be over-estimated; and if the place or climate be intelligently chosen, the happiest results may be anticipated. After recovery from a serious attack of fever, the whole man becomes changed, and there seems to be a renewal of youth. Nothing gives such a beneficial direction to this change, or renders it so perfect, as a temporary removal to a suitable climate and locality. We fully endorse Dr. Aitken's statement—No man can be considered as fit for work for three or four months after an attack of severe Enteric fever

10. *Precautionary Measures.*—To check the contagion:—(1) All discharges from fever-patients should be received on their

issue from the body into vessels containing a concentrated solution of chloride of zinc. (2) All tainted bed or body linen should immediately on its removal be placed in water strongly impregnated with the same agent. (3) The water-closet should be flooded several times a day with a strong solution of chloride of zinc; and some chloride of lime should also be placed there, to serve as a source of chlorine in the gaseous form. (4) So long as fever lasts, the water-closets should only be used as receptacles for the discharges from the sick, and disinfected as directed above.

Prevention of Enteric Fever.—Architects and builders should provide for the ventilation of every house-sewer, by a pipe running up sufficiently high, so as to prevent injury to the occupants of the upper stories. Where the waste-pipe communicates with the drains, sewer-emanations are absorbed by the water in the cistern, and foul air admitted into the dwelling.

The ventilation of sewers thus becomes a matter of great importance, for, on account of the lightness of sewage gas, hurtful results have been shown to arise where sewers and drains are merely trapped, if provision has not been made for its escape at the highest outside elevation.

Relapsing Fever.

This disease—sometimes called famine-fever, and in Germany, hunger-pest—is not common in England, but has been epidemic in Dublin, Edinburgh, Glasgow, and Liverpool. In the latter part of 1870 it was very prevalent and fatal in Liverpool, Glasgow, and other places where overcrowding prevailed. It does not occur in tropical climates, or on the Continent, except in some of the German territories, and the Crimea, where it attacked the English army during the Russian war. It has occurred also in the United States. (See Kippax on Fevers. Gross & Delbridge.)

Cause.—This is unknown; but its victims are almost universally in the lowest social rank—ill-fed, occupy crowded, filthy, ill-ventilated houses, and enjoy but few comforts. In the latter part of 1871 relapsing fever again made its appearance in Liverpool, and spread rapidly in the crowded and dirty parts of the town. Indeed, it was almost limited to the class in which a single room serves as the abode of a family. It ranks next to Small-pox

in contagiousness, the virus being communicated by the breath and exhalations. It is, however, seldom fatal, except in enfeebled and complicated cases. Typhus fever frequently accompanies or follows it.

Symptoms. — The seizure is sudden: there are rigors and headache even more severe than that of the invasive stage of Typhus, but the prostration is much slighter. There are, also, pains in the muscles and joints resembling those of Rheumatism. After a short time violent reaction sets in, with a great heat of skin; headache, throbbing in the temples, intolerance of light and sound, and sleeplessness; anxious expression of the countenance; rapid pulse—110 to 140; white-furred tongue, thirst, and, perhaps, vomiting or even Jaundice. The temperature is from 102 deg to 107 deg.; and at the height of the fever delirium may occur. Sweating may come on without relief. About the seventh day from the commencement the symptoms suddenly abate, the crisis being indicated by profuse perspiration. Sometimes a miliary eruption occurs; or bleeding from the nose, diarrhœa, menstrual discharge or hemorrhage from the bowels; after a few hours there is an abrupt cessation of all bad symptoms; the patient feels much better, and appears to improve rapidly for four or five days; when about the seventh day from the last attack, or the fourteenth from the commencement, a sudden

Relapse occurs—a repetition of the first attack. Perspiration again comes on in from two to five days in favorable cases. The sweat has a very sour and peculiar odor. In other instances, however, uncontrollable vomiting, great thirst, very rapid pulse, Jaundice, Delirium, and death may terminate the case (*Aitken*).

Sequelæ. — The most common are Pneumonia, Bronchitis, Hæmorrhage, excessive rheumatic pains in the limbs; sometimes the kidneys are involved; the dangers are similar, in some respects, to those attending Scarlatina. A species of Ophthalmia is a frequent consequence. Abortion often ensues.

Treatment — Special Indications. — *Aconitum.* — Rigors followed by feverishness, especially in the first stage.

Bryonia.—Nausea, vomiting and sensitiveness of the abdomen; sallow, anxious countenance; throbbing and heat of the head; rheumatoid pains; perspiration. It may follow Acon., or be

alternated with it. Dr. Kidd, who had great success in an epidemic of the disease in Ireland, relied chiefly on Bry.

Baptisia.—Typhoid symptoms. Dr. Dyce Brown has found it to hasten the critical sweat, while Acon. was useless.

Gels., China, and Podoph. are sometimes required. Phos. or Ac.-Phos., during convalescence.

Prophylactics.—Camphor and Nux. Vom.

Yellow Fever.

This is a specific disease, and must not be confounded with fevers of a malarial type, or others in which yellowness of the skin, delirium, etc., also occur. It is described as the hœmagastric pestilence, is maligant in character, rapidly fatal, usually happens but once to the same patient, is contagious, and chiefly endemic in low districts on the sea-coast, or along sluggish rivers. It has never been known to propagate beyond 48 deg. north latitude, nor without a temperature of at least 72 deg. Fahr.

Symptoms.—After a period of incubation of uncertain length —during which there may be merely a little depression, loss of appetite, and nausea —violent shivering and vomiting occur. The chill is rapidly followed by intense fever, rapid pulse, high temperature (101 deg. to 106 deg.), excruciating headache, backache, and pain in the limbs. Retention of urine and costiveness are present. The countenance is sad or stern, and the mind is affected. In from twenty-four to sixty hours an abatement occurs, and good nursing leads to rapid recovery. But as there is great depression of the vital powers the time is critical. Voracious hunger, dyspeptic symptoms, wakefulness, a lemon tint in the eyes, and depressed mind are of ominous import. The third stage is one of collapse. This, the most fatal stage, is marked by increasing yellowness of the skin; burning pain in the throat, stomach and bowels; dark-colored urine; Diarrhœa; restlessness; Delirium; hiccough; and the much-dreaded black vomit, resembling coffee-grounds, or soot, or snuff, suspended in water; this condition is generally associated with exudation of blood. In and advanced stage bloody furuncles occur, or hæmorrhage from various parts or organs simultaneously; the urine is albuminous

or suppressed, coma and convulsions supervene, and the life of the patient is terminated by exhaustion or syncope.

Epitome of Treatment.—1. *First Stage.*—Camph. (chills and shivering); Acon. alt. Bell. every hour (intense fever and pain in the head); Gels. alt. Bry., unless fever be much reduced in twenty-four hours; Cimic. (rheumatic pains in back, limbs and head); Ipec. (nausea or vomiting); Ant.-T., should Ipec. prove insufficient; China (prostration after hæmorrhage.)

2. *Second Stage.*—Ars. and Merc. alt. two hours; Coff (nervous and restless at night); China.

3. *Third Stage.*—Ars. and Crotalus (alt. two hours, interposing only such remedies as are called for by urgent symptoms).

Prophylactics.—Acon., Cimic., Bapt., Crude Charcoal, Hot baths.

Accessory Means.—The importance of cleanliness in so serious a contagious disease will be apparent. Discharges from the patient, and all soiled articles, should be quickly disinfected and removed, and the air of the apartment kept as fresh and untainted as possible. During the chill, a hot mustard footbath, repeated in a short time if necessary, often gives ease. A copious injection of warm soapsuds, to relieve the lower bowel, and frequent cold sponging of the whole body with tepid water acidulated with vinegar, to relieve the burning heat, are also advisable. The diet in this stage should be a few water-biscuits, soaked in weak black tea. In the second stage, rice, milk, and arrowroot may be added to the diet. In the prostration of the third stage, iced cream or champagne, beef-tea, and wine-whey may be necessary.

During the whole course of the fever, the patient must remain in bed, comfortably, but not oppressively, covered. When the heat of the skin is moderated, frictions with hot linseed, or sweet oil, or with dry mustard, are useful.

See also the Sections on "Jaundice" and "Enteric fever," especially the latter, under which will be found nearly all the information necessary.

Intermittent Fever—Ague.

Geographical facts, collected by medical writers from Hippocrates downwards, show that every country is unhealthy in pro-

portion to the quantity of marshy or undrained alluvial soil it contains, the inhabitants of such districts dying often in the ratio of 1 in 20 instead of 1 in 38—the average mortality in healthy districts. The connection of a given class of disease—represented by Remittent and Intermittent fever—with marshy districts is now distinctly established and generally recognized (*Aitken*); also, per contra, the disappearance of this class of disease has always been in direct relation to the drainage and cultivation of the soil.

Definition.—Severe paroxysms of fever, characterized by a cold, a hot, and a sweating stage, between which there is a period of comparative health, when the patient is comparatively well.

Types.—There are three chief types: (1) The Quotidian, has a paroxysm daily, an interval of twenty-four hours, and is most common in the spring; (2) The Tertian, has a paroxysm every other day, an interval of forty-eight hours, and is most frequent in the spring and autumn; (3) The Quartan, has a paroxysm every third day, an interval of seventy-two hours, and is most common in the autumn. The hours of the day during which the paroxysms occur are by no means uniform. The tertian is perhaps the most freqeunt, and has the most marked hot stage; but the quartan is the most obstinate. It is, however, remarkable as a general rule that the longer the cold stage, the shorter the interval, the longer the paroxysm. Thus the quotidian has the shortest cold stage but the longest paroxysm; the tertian a longer interval and longer cold stage with a shorter paroxysm; and the quartan with the longest interval has the shortest paroxysm. There is still another type in which, although there is an attack every day, those only resemble each other which occur on alternate days.

Laws.—Although at present ignorant of the physical or chemical nature of this aerial poison, we know that malaria obeys the following laws, which are worth remembering on account of their practical bearing:—1st. It spreads in the course of prevailing winds. It has always been observed that when the wind blows across malarious tracts of land the disease spreads in the direction of the current; while the inhabitants of the opposite district escape. 2nd. Its progress is arrested by water, especially by rivers and large running streams. Thus persons on board ship, or at the side of water opposite to a marsh, are unaffected by it,

although a favorable wind transmits the poison to a far greater distance by land. Water probably absorbs malaria; and it is a common opinion in India that water so charged produces periodic fevers in those who drink it. In like manner, thick rows of trees intercept the progress of the poison. 3rd. Malaria does not rise above the low level. It seems to be of greater specific gravity than atmospheric air, its power diminishing as we rise from the surface of the earth. Persons occupying the upper stories of a house in an infected locality suffer to a far less extent than those living on the ground floor. 4th. It is most dangerous at night. It has been often observed that sailors who go on shore in the day-time, when off a malarious coast, do so without any bad results; but that those who remain on the shore during the night are almost invariably affected.

Symptoms.—These may set in suddenly, or they may appear gradually, until a regular paroxysm occurs. The first stage comes on with a feeling of debility, weariness, chilliness, and rigors; then follow sensations as of cold water trickling down the spine and a shivering of the whole body; the teeth chatter, the nails turn blue, and the whole frame trembles, often with such violence as to shake the patient's bed. The face becomes pale, the features and skin contracted, and the papillæ of the skin are rendered prominent, giving it the appearance described as goose-skin, such as may at any time be produced by exposure to cold The countenance acquires an anxious expression, the eyes are dull and sunken, the pulse frequent and small, the breathing hurried and oppressed, the tongue white, and the urine scanty and passed frequently. After a time, varying from half an hour to three or four hours, the second or hot stage comes on with flushings, until the entire body becomes hot, with extreme thirst, full bounding pulse, throbbing headache, and restlessness, the urine being still scanty, but high-colored. At length, after two, three, and even six or twelve hours, the third or perspiring stage succeeds, and the patient feels much relieved. Thirst diminishes, the pulse declines in frequency, and the appetite returns; at the same time there is a red deposit of urates in the urine. The perspiration first breaks out on the forehead and chest, and gradually extends over the entire surface; sometimes it is only slight, but at other

times it is very copious, saturating the patient's linen and bed clothes. A paroxysm usually lasts about six hours, allowing two hours for each stage. The period between the paroxysms, as already explained, is called the intermission, but by an interval is meant the whole period or cycle between the beginning of one paroxysm and the beginning of the next.

Effects.—From the recurrence of internal congestions in each cold stage, the functions of the liver, bowels, and sometimes the kidneys, are disordered; the patient becomes sallow, his limbs waste, the abdomen is distended, and the bowels are constipated. The spleen is especially liable to be enlarged, sometimes attaining a weight of many pounds, when it can be felt externally. An enlarged spleen is popularly called ague-cake. "The heat generating power of all victims to malaria is impaired; hence they suffer from atmospheric changes, of which healthy men take no note" (*Maclean*). Another result is extreme liability to repeated attacks; for the disease often leaves the body so enfeebled that ague may be reproduced by agencies which, under other circumstances, would produce no ill-effects. But some of the symptoms supposed to be due to malaria are the effects of over-doses of Quinine or Arsenic, and have received the designation of

Dumb-ague.—Dr. Bayes has clearly shown that what Dr. Golding Bird describes, in his work on Urinary Deposits, as Dumb-Ague, with its "sallow aspect, depressed health, and visceral engorgement," is now known to be no ague at all, but is, in reality, slow quinine or arsenical poisoning. The over-dosing with quinine or arsenic—not the Ague—is "the poison which remains in the system, and is continuing its work."

Causes.—Ague is called an endemic disease, because it is peculiar to a particular locality or country. The exciting cause is an exhalation of invisible particles from the surface of the ground, known by the term malaria or marsh-miasma. Fatigue, exhaustion, insufficient or improper diet, intemperance, exposure to night-air, and previous attacks of Ague, are predisposing causes.

The curative treatment is of the highest importance, the object being, not directly to arrest the paroxsyms, but to bring about such a healthy condition of the system that the disease

may gradually decline. Sometimes it is necessary to persevere for weeks with the appropriate remedy, and not to change it frequently, or at all, if the paroxysms occur at later periods of the day, and become less severe.

Treatment—Special Indications.—*China.*—Recent cases, especially in aguish districts, when the symptoms are well-defined, take place in their regular order, and with an intermission of comparative health. The symptoms are—yellowish complexion; drowsiness after a meal; sinking, empty sensation, without hunger, or hunger easily satisfied; soreness or swelling of the liver or spleen; watery, slimy, or bilious Diarrhœa; extreme sensibility to currents of air; depression and irritability. If preferred, a trituration of Chin.-Sulph. 1 x may be used in grain doses; or four grains of Quinine with one drop of Sulphuric Acid, may be put into a four-ounce bottle of water, and a dessert-spoonful taken as a dose, every four or six hours, one being administered an hour before a paroxysm is expected. Should Quinine have been administered in excessive quantities, Ipec., Ars., Carbo V., Ced., or Nat.-Mur., may be substituted. [As a rule, the proper time to give quinine is during the intermission.]

Arsenicum.—Chronic Ague; irregular forms, when the stages are not clearly marked, as in simultaneous or alternate shivering and heat, or internal shivering with external heat; burning heat; insatiable thirst; great debility; tenderness of the liver and spleen; nausea; violent pains in the stomach; great anxiety; dropsical tendency; also when Cinchona has been used in excess. In Brow-Ague, occurring in marshy districts, Ars. is also very efficacious. A dose every four hours between the paroxysms, if they occur daily, or once in six or eight hours if they occur every second or third day.

Ipecacuhana.—Nausea, Vomiting, and other gastric disturbances, occurring before and during chill and heat; thickly-coated, yellowish, moist fur on the tongue; cold hands and feet; great oppression of the chest.

Nat.-Mur.—Chronic intermittents, with bilious Vomiting before and during the chill; great thirst; marked relief from perspiration; blistered lips, and sores about the mouth. It is in high repute in America, especially in chronic cases.

Carbo Veg.—Is recommended when the cold stage has greatly predominated. We have found it valuable in chronic cases, and have witnessed its power in preventing a recurrence of the disease. We have also proved it curative of the artificial disease induced by over-doses of Quinine—the Dumb-ague before referred to.

Accessory Means.—Removal to a healthy locality is one of the first and most essential points, and is often immediately attended by marked improvement. If compelled to remain in an aguish district, patients should not go out of doors in the evening, or too early in the morning—at least not before taking breakfast; they should sleep in the loftiest part of the house. Sunlight and air should be freely admitted during the middle of the day, but night air carefully excluded. Fatigue should be avoided; also sitting or standing in a current of air.

Diet.—On the days in which the fits occur, the food should be light, taken in small quantities, and great dietetic precautions observed until the paroxysms entirely disappear. Gruel, arrow-root, tapioca, sago, or corn-flour; mutton or chicken broth, or tender meat, may be taken in the intervals between the fits. Cold water *ad libitum.*

Preventives.—China morning and night during the prevalence of the disease in aguish districts. When compelled to be in a malarious atmosphere early in the morning and late in the evening, a good respirator should be worn; or, in the case of men, the beard should be cultivated. Immunity may also be secured to a great extent by keeping the mouth shut, and breathing only through the nostrils.

Simple Continued Fever.

The term Fever includes various forms of disease in which there are,—shivering or chilliness succeeded by preternatural heat, quickened pulse, muscular debility, and general functional disturbance. This morbid condition accompanies many diseases as one of their phenomena, and is then called Symptomatic fever, as in Phthisis, Abscesses, etc.; but under certain circumstances we meet with Idiopathic or Essential fevers, which are independent of any local inflammation, as Enteric and Typhus, which are the result of specific blood-poisons. Again, fever may be of an

ephemeral character, dependent on some cause which is merely sufficient to produce febrile disturbance without further mischief, as Simple Continued fever and Febricula.

Symptoms.—Simple Continued fever is usually ushered in by chills, or alternate chills and flushes, followed by burning heat and dryness of the skin; full, quickened pulse; dryness of the mouth, lips and tongue—the tongue being red or coated white; thirst; high-colored, scanty urine; and Constipation. These may be accompanied by pains in the loins, Headache, loss of appetite, hurried breathing, Delirum, etc. Most of the symptoms are usually more severe at night. Profuse perspiration, bleeding of the nose, Diarrhœa or herpetic eruptions, are generally associated with the decline of the fever, and the patient is left weak, but otherwise well.

Duration.—This fever lasts from one to three days, or longer. When the symptoms disappear in twelve or twenty-four hours, it is said to be Ephemeral. But severe forms of the disease may be the precursors of Typhus, Pneumonia, Acute Rheumatism, etc.

Causes.—Great, sudden changes of temperature; damp linen or houses; poor or insufficient diet, or, on the other hand, overfeeding; inebriety; injuries; the action of small or uncertain quantities of specific poisons, as of Enteric or Typhus poisons; mental or bodily fatigue or excitement; or any circumstances which shock the nervous system. It may also be associated with various local or functional disturbances, as bronchial or gastric Catarrhs, Milk fever, etc.

Treatment — Special Indications — *Camphor.* — Sudden seizure of chilliness; shivering, with lassitude, and general indisposition which has come on rapidly. Two drops of the strong tincture of Camphor on a small piece of loaf sugar, or two or three pilules, repeated every fifteen minutes, three or four times.

Aconitum.—Alternate chills and flushes, hot and dry skin, sneezing, etc. A dose every two hours, or in urgent cases, every thirty or forty minutes, until the skin becomes moist and the pulse less frequent. Should the attack be one of Simple fever merely, this remedy will be rapidly effectual; if it be the precursor of a more severe disease, it is still the best remedy at this stage.

Belladonna.—Violent Headache; redness of the face; confusion of ideas; a wild, fiery appearance of the eyes; throbbing of the blood-vessels in the temples; wakefulness, nocturnal Delirium, or other cerebral symptoms. It may follow or be alternated with Acon.

Bryonia.—Heavy stupefying Headache, aggravated by movement, with a sensation as if the head would burst; Cough and oppressed breathing; oppression at the pit of the stomach; yellow-coated tongue; nausea; Constipation; brown or yellow urine; shooting pains in the limbs; irascibility.

Arsenicum.— Severe or prolonged cases of Febricula, with much prostration, especially when the symptoms have a periodic character, or occur in feeble patients.

If the symptoms do not yield to the remedies prescribed, but increase in severity when they are expected to be declining, the case will probably prove to be one of Enteric fever.

Accessory Treatment.—The patient should be protected from too much light, heat, noise, company, too many or too thick bed-coverings, and everything likely to cause excitement or prevent sleep. In the early stage of the fever, the adoption of the hot foot-bath, described p. 43, or the wet-pack (p. 44), often restores the equilibrium of the system, or, at least, hastens the cure. Water should be the principal beverage, given in small, frequently repeated draughts; it encourages perspiration, and promotes the favorable action of the baths just prescribed. In acute fever cold water is like the "Balm of Gilead."

Remittent Fever.

Definition.— Febrile phenomena, with exacerbations and remissions, the latter being less distinct in proportion to the intensity of the fever, which is malarious, and characterized by great intensity of Headache, the pain darting with a sense of tension across the forehead. It is accompanied by functional disturbance of the liver, and frequently yellowness of the skin. The malignant local fevers of warm climates are usually of this class. (*Aitken.*)

Symptoms.—In addition to those stated in the definition:—An attack may come on suddenly, or be gradually accompanied

by the usual precursory chills. The hot stage, or period of exacerbation, commences before or about noon, and subsides before night, or the reverse; there is much Headache, "a painfully acute state of every sense," and great throbbing in the arteries of the neck; also dry tongue, excessive thirst, tenderness at the epigastrium, and pain in the region of the liver.

Delirium, preceded by distressing giddiness, is a frequent accompaniment; when these symptoms are very marked, or there is lethargy or Coma, a severe form of the disease may be expected; there is also sometimes Vomiting of colorless, bilious, or bloody matters. The paroxsyms may terminate in from six or seven to thirty-six or forty-eight hours. Inability to sleep is most constant. The first exacerbation is the longest; but generally after twelve or sixteen hours the symptoms remit. The duration of the remission is as various as that of the hot stage; the second paroxysm is more severe than the first, and is not preceded by chills, etc., but the febrile phenomena are more marked. In bad cases there is Jaundice; typhoid symptoms supervene; black vomit, fœtid breath, Convulsions, and death follow. In favorable cases, the disease shows signs of decline after the fifth exacerbation.

The great difference between Intermittent fever and Remittent consists in the fever being entirely absent during the interval in the former disease, whilst it is only partially so in the latter.

Treatment. — The first and most immediate object of treatment is to reduce the force and frequency of arterial action during the paroxysm. (*Aitken.*) This, to the homœopath, is equal to prescribing Aconitum; and though that remedy has no specific relation to the blood poison itself, it is capable of effecting "the first and most immediate object of treatment."

Epitome of Treatment.—

1. *Precursory Stage.*—Gels., Camph. (chills).
2. *Hot Stage.*—Acon. and Bell.
3. *Advanced Stage.*—Ipec. (gastric disturbance); Bapt. or Ars. (typhoid condition); Hyos. or Bell. (Delirium); Coff. (sleeplessness); Opi. or Rhus. (Coma, or stupor); Phos. (Jaundice); Ars., Arg.-Nit., or Verat. (excessive Vomiting or black vomit, etc.).
4. *During the Remission.*—Quinine.
5. *Preventive.*—Gels.

See also "Jaundice," and "Enteric Fever." The "Accessory treatment" prescribed in the last-named disease is in most respects suitable to Remittent Fever.

Simple Cholera—Sporadic Cholera.

Definition.—A disease accompanied by vomiting and purging, the discharges being bilious (distinguishing it from malignant Cholera, in which the discharges are not bilious), and which, if unchecked, may be followed by Cramps in the stomach and bowels, and collapse. It occurs from occasional causes, and in single or scattered cases; hence it is called sporadic.

Summer Diarrhœa, by which is meant the Diarrhœa prevalent in autumn and in hot weather generally, is of the same character, and requires similar treatment.

Epitome of Treatment.—Camph. (chills); Ipec., alt. Coloc. (severe griping or Cramps); China (simple diarrhœtic evacuations with griping); Verat.-alb (sudden and violent attacks of Vomiting and watery Diarrhœa, even with Cramps and collapse); Iris Vers. (bilious motions with colicky pains); Ars. or Acon. (collapse).

For further details see Section on "Diarrhœa," from which it is distinguished by being not a local but a general disease.

Asiatic Cholera—Malignant Cholera.

In this disease, which resists the efforts of the old system, Homœopathy has won brilliant and undying triumphs.

Definition.—Malignant Cholera, a miasmatic disease (often epidemic), propagated through the air, and communicable from one person to another, is usually ushered in by premonitory painless Diarrhœa, and accompanied by sudden prostration, tremors, dizziness, spasm of the bowels and limbs, faintness, profuse serous (rice-water) or bloody alvine discharges, Vomiting, burning heat at the stomach, coldness and dampness of the whole surface of the body, cold tongue and breath, unquenchable thirst, feeble rapid pulse, extreme restlessness, oppressed breathing, albuminous or suppressed urine; blueness of the body, sunken and appalling countenance, peculiar odor from the body, collapse, and finally—unless reaction comes on—death (*Aitken*).

Cause.—Pathologists are not yet agreed as to the exact char

acter of the *materies morbi*, but are unanimous in regarding the disease as a most serious one. In India and other Asiatic countries, it is especially sudden and fatal. Instances of death taking place in two, three, four, or more hours, are extremely common. The experience gained during former visitations of Cholera teaches us that it seizes the poor in a far greater proportion than the rich, that the most potent conditions favorable to its spread are poverty, overcrowding, filth, intemperance, and impure water; and that as we prevent the accumulation of filth, foul air, and other causes of general disease, and supply the people with wholesome food and pure water, so we render inoperative the powerful agencies by which this dreaded disease chiefly spreads.

Treatment — General Indications.—Camphor, at frequent intervals, directly the first symptoms of Cholera—Diarrhœa, chilliness, and spasmodic pains in the abdomen—are noticed. It is often sufficient to cure the disease immediately in that stage. Should the disease have much advanced before the use of Camph., administer

Aconitum.—Dr. Hempel found this remedy eminently useful, during the first invasion of the disease, in restoring the pulse and rousing the vital reaction generally. The 1x., or strong tincture, should be given. Our own experience with Acon., during the epidemic of 1866-7, when we prescribed it in several cases of Diarrhœa with great pain in the bowels, coldness of the body, and cadaverous appearance, fully confirms the foregoing statement.

Arsenicum.—Cramps, suppressed urine, and sudden extreme prostration, the last symptom being more marked than the profuseness of the discharges. A dose every thirty to sixty minutes.

Veratrum.—Excessive vomiting and Diarrhœa, with Cramps.

Cuprum.—Cramps, and a cyanotic condition.

Accessory Means.—Absolute rest in the recumbent posture, from the very commencement of the Diarrhœa. A hopeful and cheerful state of mind should be fostered: a presentiment of death being unfavorable.

The sick-room should be warm but well-ventilated; and the heat of the body maintained by friction, hot bottles, etc. Ice and iced water may be given freely; no food, much less stimulants;

enemata of warm milk often repeated, though rejected, are beneficial. The return to ordinary diet should be slow. Evacuations, bedding, and clothing should be disinfected. (See Section on Nursing.)

Preventive Treatment.—When Cholera is epidemic, Rubini's Camphor Pills should be taken once or twice a day, in doses of two or three at a time. The simple diarrhœa which often precedes Malignant Cholera should be promptly met. Camph., Ars., or Acon. may be prescribed according to the indications.

Sanitary and Hygienic Measures.—The following excellent advice has been given, and should be adopted on the earliest indication of Cholera:—

The house should be well aired, especially the sleeping apartments, which should be kept dry and clean.

All effluvia arising from decayed animal or vegetable substances ought to be got rid of; consequently, cesspools and dust-holes should be cleaned out, and water-closets and drains made perfect. Disinfectants should be liberally used.

All exposure to cold and wet should be avoided, and on no account should any one sit in damp clothes, particularly in damp shoes and stockings. Care should be taken to avoid chills or checking perspiration. Clothing must be sufficient to keep the body in a comfortable and even temperature.

Habits of personal cleanliness and regular exercise in the open air should be cultivated; also regularity in the periods of repose and refreshment: anxiety of mind and late hours should be avoided.

The diet should be wholesome, and adapted to each individual habit. Every one should, however, be more than ordinarily careful to abstain from any article of food (whether animal or vegetable) which may have disordered his digestion upon former occasions, no matter how nutritious and digestible to the generality, and to avoid all manner of excess in eating and drinking.

Raw vegetables, sour and unripe fruits, cucumbers, salads, pickles, etc., should not be allowed.

Wholesome varieties of ripe fruits, whether in their natural or cooked state, and vegetables plainly cooked, may be taken in moderation, by those with whom they agree.

Diphtheria.

Definition.—A specific, contagious, and sometimes epidemic disease, in which some morbid material has been received into the blood, and in which there is exudation of lymph on the lining of the mouth, fauces, and upper part of the air-passages, or, occasionally, on an abraded portion of the skin, attended with general prostration, and sometimes remarkable nervous phenomena.

As just described, it is a blood disease, manifesting local distinctive symptoms. It would be incorrect in theory, therefore, and might lead to grave errors in treatment, if the constitutional disturbances were regarded as the effects of the physical changes about the throat, and so concentrating the attention on the tangible mischief, rather than attempting to cope with the whole systemic depression.

Symptoms.—Diphtheria is divisible into two classes, simple and malignant. In the simple variety, happily the most common, the symptoms are at first so mild as to excite little complaint beyond slight difficulty of swallowing, or pain in the throat, burning skin, pains in the limbs, etc., and is readily cured by one or more of the following remedies. Malignant Diphtheria is ushered in with severe fever, rigors, vomiting, or purging, sudden great prostration and restlessness, anxious countenance, etc., pointing to some overwhelming disease, under which the system is laboring. The skin is hot, the face flushed, the throat sore, and the mucous membrane bright-red; the tonsils are swollen, and grey or white patches of deposit appear on them, small at first, but gradually enlarging, so that one patch merges into another, forming a false membrane in the throat, rendering swallowing and even breathing difficult. In some cases, the false membrane has been detached, and after extreme efforts ejected, presenting nearly an exact mould of the throat. The exudation of Diphtheria may be distinguished from a slough by its easily crumbling, by the facility with which it can often be detached, and by the surface thus exposed being red, but not ulcerated. The false membrane looks like dirty wash-leather; and between it and the true membrane an offensive bloody discharge exudes, imparting to the patient's breath a most repulsive odor. The glands of the neck are always enlarged, sometimes pain is felt in

the ear, and there is generally stiffness of the neck; the inflammation is liable to extend rapidly, in consequence of the continuity of the lining membrane of the throat with the mouth, nose, windpipe, and even the air-tubes of the lungs. If the disease progress, the patient passes into a stupor, and the difficulty of swallowing or breathing increases, till the false membrane is forcibly ejected, or the patient dies from suffocation, the exudation blocking up the air-tubes; or, more frequently, he sinks from exhaustion, similar to that observed in Enteric fever.

Dangerous Symptoms.—Increased fœtor of the breath, a quick, feeble, or very slow pulse, persistent Vomiting; drowsiness and Delirium; bleeding from the nose; extension of the disease to the lining of the nose; dyspnœa; suppressed, or albuminous urine; increase of temperature.

Diagnosis.—Diphtheria differs from Croup in several points: 1. There is a premonitory illness without premonitory cough. 2. The local inflammation begins in the pharynx instead of the trachea, although it may afterwards spread to the fauces, œsophagus, and downwards along the respiratory tract. 3. It attacks adults as well as children. 4. It is attended with extreme depression of strength, and in adults is usually fatal by asthenia, but in children sometimes by asphyxia, through obstruction of the larynx. 6. Diphtheria is distinguished by a false membrane; while tenacious viscid mucus covers the swollen membrane in Croup.

Some have thought that Diphtheria was only Scarlet fever without an eruption; but, although there is some analogy between these diseases, further investigation has shown that they are distinct affections. In Diphtheria, the fever is from the first of an asthenic type, whilst such a condition is an exception in Scarlatina. An attack of Scarlatina confers no exemption from subsequent Diphtheria, and *vice versa*. The after-effects of Diphtheria are of a severe nervous character; those of Scarlatina involve mischief in the kidneys or the chest.

Cause and Mode of Propagation.—Impure air, from imperfect drainage, living too near manure-deposits, slaughter-houses, or where animal substances are in a state of decomposition. It commonly occurs as an epidemic, and a solitary case may prove a

focus for spreading the disease. The severity of the attack seems to depend as much on the health of the patient as on the character of the infecting source.

Sequelæ.—After a short period of convalescence—a few days to one or two weeks—sequelæ are apt to arise, usually of disordered innervation, varying from defective nervous power in one or more sets of muscles, to a more or less perfectly defined Paralysis. Nerves about the throat, the seat of the local manifestations of the disease, are especially liable to suffer, causing difficulty of swallowing, Hoarseness, etc. The most alarming is loss of nervous power of the heart, with feebleness of action, or, in extreme cases, complete cessation. But recovery from the sequelæ is not infrequent, though it is generally tedious.

Treatment — Special Indications. — *Belladonna.* — Mild cases rapidly recover, and more severe cases often yield under this remedy when perseveringly administered in the 1x dilution. Hughes recommends a freer resort to the aid of Bell., but very properly adds, that if decided improvement has not resulted within forty-eight hours of commencing its use, or if the symptoms yield at first to the remedy, but soon return, there is no advantage in persevering with it.

Acid.-Mur.—Malignant Diphtheria, with foul, greyish ulceration of the throat, fœtid breath, and great general prostration. This remedy should be used in a low dilution, in frequently-repeated doses; and locally as a paint to the throat, or as a gargle, when the patient is able so to use it.

Merc.-Iod.—This remedy has proved of great value in the disease, and should be administered as soon as any diphtheritic patches are observed in the throat, or swelling of the glands of the neck. Difficult swallowing, pain in, and swelling of, the salivary glands, and putrid sore throat, indicate this remedy. The 1x or 2x trituration is the strength on which we place the greatest reliance in this disease.

Kali Permang.—Malignant Diphtheria, with extensive swelling of the throat and cervical glands; pseudo-membranous deposit, partially or completely covering the fauces; obstructed swallowing; a thin, or muco-purulent discharge from the nose, excoriating the parts; thick, obstructed speech, and very offensive breath.

"There is no remedy with which I am acquainted that will so rapidly and surely remove the offensive odor of the diphtheritic breath as the Permanganate. In this respect, the Chlorate of Potash closely resembles it." (*Dr. H. C. Allen.*)

K.-Permang., K.-Chlo., dilute Carbolic Acid, should be used as a gargle or wash to the affected parts; or administered by inhalation, or the spray producer.

Baptisia and Phytolacca.—Both these remedies are strongly recommended in Diphtheria; the former has a more specific relationship with the blood-poison, and the latter with the local effects of the disease.

Arsenicum, in the last stages of the disease, is of immense value, particularly when the prostration of strength is very marked, or is increasing; when there are: œdema, putrid odor of the throat and air-passages, and tenacious fœtid discharge from the lining membrane of the nostrils.

Ammon-Carb. is also a valuable remedy in malignant cases, and may be administered alternately with Ars.

[A Treatment of Diphtheria that has been successfully administered at the first invasion of the disease, is as follows:

Take ten grains of permanganate of Potassium and mix with one ounce of cold water. As soon as dissolved, apply with a rag or sponge to the whitish places in the tonsils, and other parts that have the diphtheritic membrane. Do this very gently, but thoroughly, every three hours until better; then less frequently until well. If the tongue is not coated white, take twenty drops of the tincture of Phytolacca to four ounces of cold water—give a teaspoonful every four hours.]

Local Treatment. In the commencement, a large, thick, hot poultice should be applied around the throat; but in advanced severe cases external applications are inadmissible, as they rather tend to increase the œdema and extend the disease. The inside of the throat may be steamed with the vapor of water and Acetic acid (a wine-glassful of strong vinegar to a pint of water).

[During the early stages of the disease a gargle of tincture of Hamamelis diluted with one-half water is good; rubbing the throat externally with Cosmoline or Camphorated oil and binding it up with cotton-wool, will often aid in dispersing the severe congestion.

After the exudation appears, dilute Alcohol applied to the throat by means of a bit of cotton saturated and held in a probang, will help to dissolve the membrane.

A gargle of Non-saccharine Phenic acid is excellent.

Lactic acid, one part to twenty parts water, used for spraying the throat every two hours has also been found a good dissolvent of the membrane.]

A very abundant and fœtid false membrane is liable to reinfect the system secondarily, and hence such solvents and deodorizers as Ac.-Mur., K.-Permang., Glycerine, Ac.-Acetic and especially dilute Carbolic Acid, are of the greatest value.

Tracheotomy is sometimes performed, but it can hardly be expected to save life, inasmuch as the disease and false membrane often extend down the trachea to the bronchi, beyond the reach of this operation. It is only permissible *in extremis.*

Warm Vapor.—The temperature of the room should be maintained at 68° deg. Fahr., and the atmosphere made moist by the steam from a kettle with a long spout constantly boiling on the fire. Such an atmosphere is easily secured by forming a tent with blankets over the bed, and then bringing a pipe to convey the steam under it.

[In very severe cases of Diphtheria, Diphtheritic Croup and Membraneous Croup, the use of the vapor of slacked lime is of great value. It should be used with great care and always under the supervision of a physician.

The unslacked lime should be put in a wash-tub and cold water poured over it until it steams. When the paroxysms of suffocation come on, hold the child over the fumes a few minutes at a time until easier. This should be repeated at such intervals as seem necessary; in fact the air of the room should be filled with the vapor.]

Warm Baths.—These are valuable accessories. The skin is hot and dry, the urine is often suppressed, the bowels confined, and thus the poison is retained in the system. Warm baths, and the free use of cold water as a beverage, often restore the functions of the skin, the bowels, and the bladder.

Ice.—If vomiting occur, constantly sucking small pieces of ice tends to allay it; it also affords comfort to the patient by

checking the secretion of the mucus, and, as a diluent, favors the action of the kidneys.

Diet, etc.—From the very commencement of the disease the strength of the patient must be well sustained by nourishment, and he must be urged to swallow it in spite of the pain which it occasions. Eggs beaten up in milk, or in brandy with water and sugar; beef-tea slightly thickened with the rice or pearl-barley; arrowroot or sago, with port or sherry. Sudden extreme prostration requires wine or brandy.

Children who persistently refuse to swallow, must have nutritive injections in bad cases. Dr. Kidd recommends the yolk of an egg beaten up with a tablespoonful of new milk, and two teaspoonfuls of fresh rennet, or an ounce of extract of beef with a scruple of pepsin. Injections (about one ounce at a time) should be commenced, if necessary, immediately the true character of the disease is recognized, and repeated every two to four hours.

Convalescence.—Much caution and patience are required during convalescence, as relapses are prone to occur. Nourishing diet, rest, and change of air, are of great utility. Nothing does so much good as a thorough change of air.

Preventive Measures.—The cesspools should be emptied, and if too small or defective, new ones built. The house, water-closets, and local drainage should be thoroughly examined, and imperfections scrupulously rectified: also, if necessary, chloride of zinc or of lime constantly kept therein, and thrown down the drains. All dust-holes and accumulations of refuse should be cleared away; while a plentiful supply of water should be kept in the house, and every room regularly well cleaned, whitewashed, and thoroughly ventilated.

Influenza.

Definition.—An epidemic disease, with special and early implication of the lining of the nose and upper part of the throat, lasting from four to eight days. One attack is not preservative against a subsequent one in another epidemic. Although it generally attacks the mucous membranes of the air-passages, yet it often locates itself in other tissues.

Diagnosis.—The symptoms differ from those of common cold

chiefly in their sudden appearance and rapid extension among a population, their disconnection with either a low or a sudden variation of temperature, the great febrile disturbance which prevails, general prostration and nervous depression which accompany and follow the disease, and in their protracted duration. In many cases there is a herpetic eruption around the mouth.

Symptoms.—Chilliness or coldness down the spine, anxiety, feverishness, frontal headache, pains in the limbs and back, severe paroxysms of cough, nausea, loss of appetite, vitiated taste, aching pain and suffusion of the eyes, sneezing, thin, acrid discharge from the nostrils, and extreme muscular prostration. In short, all the symptoms which characterize Gravedo, Coryza, and Bronchitis respectively, are often present in Influenza.

Treatment.—1. *Uncomplicated Influenza.*—Camph., Acon. (chills), Ars.

2. *With troublesome cough.*—K. Bich.

3. *Tedious or imperfect recovery.*—Sulph., Phos., Ars.

Diet and Regimen.—Farinaceous food, and if there be great prostration, beef-tea, with repose in bed, or on a couch. In many cases, confinement in bed for a day or two is quite necessary for the safety of the patient, and always hastens recovery. The room should be warm, well ventilated, and the patient placed so as to avoid draughts. If there be much fever present, with loss of appetite, toast-and-water or barley-water will be suitable. For severe cough, the air of the room should be kept moist by conducting into it the steam from a boiling-kettle by means of a tube, or by putting boiling water into flat shallow vessels; also inhalation of hot vapor is useful (see "Inhalation," pp. 50-51). When the fever abates, a more generous diet should be allowed. If prostration be the predominant symptom, beef-tea should be resorted to. After a severe attack, change of air, with walking or horse-back exercise, is very desirable. During an epidemic of influenza, night-air is injurious.

Complications.—Should these arise, they must be treated according to their nature, as directed in other portions of this work. The most common are Cynanche, Pneumonia, Bronchitis, Diarrhœa, Dysentery, Erysipelas, and a low form of Arthritis.

Erysipelas.—St. Anthony's Fire.

Definition.—An inflammatory affection of the skin (simple Erysipelas), sometimes extending into the tissues beneath, with diffuse inflammation of cellular tissue (phlegmonous Erysipelas); and tending to spread indefinitely.

Idiopathic Erysipelas arises fron constitutional causes, and generally affects the head or neck; traumatic, follows a wound or injury, and may occur on any wounded part.

Symptoms.—Simple Erysipelas is known by a spreading inflammatory redness of the skin, with considerable puffy swelling, tenderness, burning, painful tingling, and tension. The color varies from a faint-red to a dark-red or purplish color, becoming white under pressure, but resuming its former color on the removal of the pressure. An attack is usually ushered in with shivering, languor, headache, nausea, bilious vomiting, and the ordinary symptoms of Inflammatory fever, accompanied or followed by inflammation of the part affected. When Erysipelas attacks the face, it nearly always commences at the side of the nose near the angle of the eye.

Phlegmonous Erysipelas is marked by a deeper redness, or it may be redness of a dusky or purple hue, which is scarcely, if at all, removed by pressure; the pain is burning and throbbing; the swelling is greater, and the surface irregular; and there is often deep-pitting upon pressure. Sometimes the swelling and disfigurement are so great that the features are quite obliterated, and the parts lose all resemblance to anything human. Delirium often occurs irrespective of any involvement of the membranes of the brain.

Dangers.—Erysipelas may prove fatal in the following ways: (1) By exhaustion: the constitutional symptoms resemble those of Enteric fever, and the degree of blood-poisoning is great, although the local disease may be limited in extent. (2) By obstruction to the air passages: the inflammation may lead to infiltration of the submucous tissues about the windpipe, the opening into which may be closed, and the patient die suddenly of apnœa. The symptoms indicating this condition are—impaired respiration, slight lividity of the lips or finger nails, altered tone of voice, or Cough, etc.

(3) By coma, from effusion within the cranium: this may arise from extension of the inflammation to the membranes of the brain.

Causes.—Exposure to cold; impaired digestion; wounds, particularly from dissecting and surgical instruments; badly-ventilated and over-crowded apartments; certain conditions of the atmosphere; and a morbid state of the blood from disease, the habitual use of stimulants, etc., and consequent debility. The tendency of this disease to attack different parts simultaneously, or by metastasis, furnishes evidence of its origin in a vitiated condition of the blood. The chief exciting cause of Erysipelas is a recent wound, and the predisposing cause is inattention to hygiene, combined perhaps with a personal or family proclivity to the disease.

Prognosis.—The simple and cutaneous variety is attended with much less danger than the phlegmonous; the idiopathic with less than the traumatic. It is also more serious when it occurs in an epidemic or endemic form. Mere extent of inflammation is not of so much importance as a high degree of blood-poisoning, combined with a rapid, weak pulse, a dry, brown tongue, low muttering Delirium, and great prostration. When the disease attacks the head, unless it is controlled by skillful treatment, the membranes of the brain are in danger of being implicated. The disease in any of its forms is most serious at either of the extremes of life. Lastly, the habits and health of the patient, prior to the attack, greatly influence the result. It is especially fatal to drunkards and in broken-down constitutions.

Treatment.—*Aconitum.*—General fever, with local inflammation and tenderness. Acon. is mostly required before the rash appears, but may be given, if indicated, at any stage of the disease, for either smooth or vesicular Erysipelas.

Belladonna. — Cutaneous, bright-red inflammation, swelling, and non-vesicular eruption. If there be excessive swelling, Apis should be preferred. Violent Headache, thirst, Constipation, and brown-red thick urine, indicate Bell.; also extension of the inflammation towards the brain, with Delirium, lethargy, or twitching. It may be alternated with Acon. early in the disease.

Bryonia, instead of Bell., if the joints are specially affected.

Pulsatilla, if the disorder flies quickly from one part to another; Indigestion after the eruption declines.

Rhus Tox.—Vesicular Erysipelas, whether on the face or elsewhere, with swelling and shining redness; great restlessness.

Veratrum Vir.—Is also adapted to vesicular Erysipelas, when accompanied by cerebral disturbance.

Apis. — Erysipelas with acute œdema, without the intense cutaneous inflammation indicating Bell., or the disposition to form vesicles like Rhus.

Cantharis. —Erysipelas with much inflammation, burning, vesicles, and serous exudation. Erysipelas from the use of Arnica.

Arsenicum.—Erysipelatous inflammation taking on a gangrenous character, when fresh patches appear as others decline; also when there is excessive general prostration.

Local Measures.—The natural functions of the skin should be promoted, and currents of air, or exposure to great variations of temperature, guarded against. In mild forms of the disease, no external applications are required; wet compresses, ointments, etc., are not only useless, but favor the spread of the inflammation. But when there is great heat or irritability of the skin, much relief will be experienced by dusting it over with dry flour, finely-powdered starch, or violet powder. Flour is also useful to absorb any fluid that exudes from the skin. When, however, inflammatory swellings are very tense and painful, warm fomentations may be first applied, and afterwards the part sprinkled over with flour or fine starch, or painted with collodion, if the inflammation is of limited extent, or any other suitable substance, to keep out the air. If there is much œdema, moderate pressure should be maintained by the application of well-adjusted bandages. If matter forms, incisions are generally necessary to afford openings for its discharge; poultices are then to be applied, and afterwards bandages, to prevent the lodgment of matter. It has been recommended to circumscribe the affected part with a piece of caustic, or a camel's-hair pencil dipped in Iodine. This, it is asserted, prevents the spread of the eruption. A lotion of Ac.-Carbol. and Milk (gtts. xxx. ad Oj) gives great relief. Subcutaneous injections of Ac.-Carbol. have been employed. Lotions of, or painting with, Verat.-Vir. we can strongly recommend.

Diet.—Pure water, gum-water or barley-water, with lemon-juice, to allay the thirst. Severe and tedious cases require beef-

tea, and even wine or brandy. Subsequently, a change of air, regular habits, and nourishing diet, essential in the after-treatment of all acute diseases, are necessary after severe Erysipelas.

CHAPTER II.

GENERAL DISEASES (Continued).

Acute Rheumatism—Rheumatic Fever.

Definition.—A specific febrile disorder, accompanied by acute inflammation of the white fibrous tissues,—ligaments, tendons, sheaths of tendons, aponeuroses, fasciæ, etc.—surrounding the joints, of which several are affected simultaneously, or in succession. The local symptoms are very erratic; the skin of the affected part is covered with a copious, sour, sticky perspiration, containing lactic acid; and the blood has a large excess of fibrine, probably to the extent of thrice the normal quantity.

Sub-acute Rheumatism is the same affection in a modified form, often following upon the acute disorder.

Symptoms.—Acute Rheumatism is usually ushered in with febrile disturbances, followed by the local attack of inflammation of the fibrous structures about one or more of the larger joints—the shoulder, elbow, knee, ankle, the fibroserous covering of the valves of the heart, the pericardial sac, etc. Exposed joints appear to be more prone to attacks than those that are covered, the larger more frequently than the smaller, and the small joints of the hands more frequently than those of the feet. Sprained or otherwise injured joints are particularly liable to suffer. The general febrile condition often precedes the local inflammation one or two days; sometimes the general and local symptoms occur simultaneously, while in others the inflammation of the joints precedes the febrile condition. The affected joints are swollen, tense, surrounded by a rose-colored blush, and acutely painful; pain is a more constant symptom than swelling, and swelling than redness. The pain has many degrees of intensity, is generally

intermittent, abates somewhat in the day, but is aggravated at night, and in all cases is increased by pressure, so that even the touch of the medical attendant or nurse, or the weight of the bed-clothes, can scarcely be borne. Often the patient remains fixed, as it were, in one posture, from which he cannot or dare not move. The skin is hot, but covered with a sour offensive sweat, and so highly acid as to redden litmus paper. The perspirations, although unattended by immediate relief, are Nature's mode of elimination; for the pains are always aggravated, and the constitutional symptoms intensified, if they become suppressed. It is only when the perspirations lose their peculiar sour character that they become useless. The urine in acute Rheumatism is scanty, often resembling porter in color, of high specific gravity, and deposits, on cooling, deep-colored sediments of urates. The pulse is round and full, varying from 90 deg. to 120 deg.; the tongue loaded with a yellowish-white mucus; the head is but slightly affected. The usual absence of Headache or Delirium distinguishes acute Rheumatism from the continued fevers. Intense thirst is a common feature, the appetite is fastidious, and the digestive functions are seriously impaired.

Metastasis.—Rheumatism is usually erratic; it often suddenly quits one joint to appear in another, and then in another; afterwards travelling back, perhaps to its original seat, the development of inflammation in one joint being often accompanied by its rapid subsidence in another, this alternation occurring many times during an attack. But the most serious metastasis is from the joint-structures to the pericardium or the valves of the heart. This complication may be expected in very severe attacks, in young persons, in women oftener than in men, in patients who have been previously weakened, and in persons troubled with irritability or Palpitation of the heart.

Heart Complications.—When Cardiac inflammation arises, the patient's countenance becomes dreadfully anxious, the breathing distressed, and pain is complained of in the heart's region; also there is tenderness between and under the ribs, and there may be Palpitation or irregular action of the heart. The physical signs of Pericarditis may be detected by the stethoscope, and a distinct friction or to-and-fro sound like the rubbing of

paper, owing to the roughening of the serous surfaces by effusion of fibrine. This sound may soon be lost, either from the opposite surfaces becoming glued together, or separated by serous effusion. If the amount of effusion be large, both the circulation and the respiration become seriously embarrassed, the heart beats tumultuously, the sounds become muffled, and there is increased extent of dullness in the heart's region. Endocarditis may arise, with Pericarditis or separately. The symptoms are similar to those of Pericarditis, but the physical sign is a *bruit.* In consequence of the extreme danger of these complications, all cases of severe Rheumatic fever should be watched daily by a medical man, so that the signs and symptoms of heart complications, which often come on insidiously, may be early recognized and met.

Rheumatism and Gout.—For a tabular statement of the differences between these diseases see Acute Gout.

Causes.—The predisposing cause is constitutional cachexia, which produces a morbid product in the blood, by some unhealthy assimilation. These *materies morbi,* with which the blood is loaded, constitute that predisposing cause without which it is probable the disease would never occur. Hereditary predisposition undoubtedly exists in many persons. The suppression of an eruption or rash, as Measles, or the sudden stoppage of Dysentery, may also act as a predisposing cause.

The exciting causes are—exposure to cold and wet, especially evaporation from wet or damp clothes, causing chill. This is no doubt an explanation why the disease is most common among the poorer classes of society, who cannot protect themselves so effectually as their wealthier brethren. The cold probably excites an attack of acute Rheumatism by arresting the secretory functions of the skin, by means of which, in health, morbid substances in the blood are often removed; now, however, the functions of the skin being deranged, unhealthy principles accumulate in the blood, and Rheumatism results. Mere cold, however, is not so much a cause of Rheumatism as extreme atmospheric vicissitudes. Hence it is found that it does not prevail most in the coldest regions of the globe, but rather in those climates, and during those seasons, which are damp and changeable.

Treatment.—*Aconitum.*—Acute Rheumatism, especially at

the commencement, when the fever is high, and there are violent shooting or tearing pains, worse at night, and aggravated by touch. Also swelling and redness of the affected parts, impaired appetite, high-colored urine, etc. Acon. may be administered either alone or in alternation with Bry., at intervals of one to three hours; or the latter may be administered in the daytime, and the former at night. Administered very early, Acon. is often sufficient to cure Rheumatism without the aid of any other remedy. It should be given in a low dilution.

Bryonia.—Lancinating or stitching pains, affecting the muscles rather than the bones, worse on the least movement, but relieved by rest; also febrile heat, gastric derangement, profuse perspiration, or coldness and shivering, and irascibility. Cardiac, lung, or pleuritic complications are but extensions of the rheumatic disease, and are not, therefore, necessarily indications for any change from Bry. or Acon. But it is sometimes necessary to change the remedy to Rhus if the tendons become implicated, or to Cactus or Spig. if the heart is specially involved.

Belladonna.—Frequent doses at night for sleeplessness.

Sulphur.—After the acute symptoms have subsided, to complete the cure and prevent obstinate sequelæ; when the constitutional predisposition is strongly marked; and as an inter-current remedy. It is especially useful when the pains are drawing and tearing, worse when cold, and better when warm.

Diet.—During the fever the diet should be mainly restricted to water, milk-and-water, barley-water, gruel, and arrowroot, at least at first; afterwards, beef-tea, mutton-broth, etc. In Rheumatic fever, a strictly non-nitrogenous diet has been found very useful. By thus temporarily cutting off the supply of nitrogenous matter, which by imperfect oxidation causes acidity, the end sought in the allopathic treatment by alkalines and by blisters is obtained, and the natural process of cure assisted. But as this diet lowers cardiac power, it should be adopted with extreme caution in very debilitated patients, and discontinued if not soon found beneficial.

Hydropathic Treatment.—In the early stages of the disease is highly beneficial. Warm baths, hot-air baths, or hot compresses, are useful and comforting. Wet-packings, repeated as

often as the fever returns, and enveloping the joints which are chiefly implicated, or even the whole body with several folds of wet linen, are most useful adjuncts. Except, however, when the skin is hot and dry, and temperature high, cold applications are contra-indicated, as, from the migratory character of the disorder, great risk would be incurred of repelling the poison into the circulating fluid, to settle possibly upon the heart or other internal part. Dr. Wilson Fox has tried with success the following treatment, which has been found especially useful when the pains were excessive, and the temperature high. The patient first received a vapor-bath, and then was thoroughly douched with water, commencing at a temperature of 90 deg., gradually cooled down to 40 deg. Fahr.

Blankets in Rheumatism.—An invaluable adjunct to the measures already suggested is that of enveloping the patient in flannel blankets. Bedding in blankets greatly reduces the risk of Inflammation of the heart, diminishes its intensity and danger when it does occur, and at the same time does not prolong the convalescence.

Bandaging the affected joints lessens pain, shortens the attack, and secures rest.

Muscular Rheumatism.

Definition.—"Pain in the muscular structures, increased by motion." The most familiar local varieties of this affection are Stiff-neck, Lumbago, and Sciatica. Muscular Rheumatism is rarely accompanied by redness, swelling, or other external symptoms.

Stiff-neck—Crick-in-the-Neck.

Definition.—A rheumatic affection of the muscles of the side of the neck, chiefly the sterno-cleido-mastoideus, which become rigid, hard, and swollen. The least attempt to turn the neck is attended with acute pain. Sometimes the Rheumatism extends to the articulations of the clavicle and intercostal muscles.

Treatment.—Acon. (from exposure to draughts); Dulc. (from damp weather); Bell. (with tearing lancinating pains). For other remedies see "Lumbago."

Lumbago.

Definition.—Rheumatism of the sheaths of the fleshy mass of the lumbar muscles on one or both sides of the loins, extending often to the ligaments of the sacrum, the pain being aggravated by movement of the back, and by pressure.

Treatment. — *Rhus Tox.* — Lumbago from getting wet; increase of pains during repose, at night, on first moving the affected part, or on first getting up in the morning; rigidity; chronic Lumbago.

Arnica. — Lumbago implicating muscles that have formerly been injured, as by over-lifting, a sprain, or a blow.

Aconitum.—Recent Rheumatism of the lumbar muscles, unassociated with injury.

Cimicifuga.—An excellent remedy in most cases, particularly if the sciatic nerve is at all affected.

Phytolacca. — Excruciating pains suggesting renal inflammation.

Ant.-Tart.—Acute pain on movement, inducing nausea, cold perspirations, and occasional cramps.

Sciatica.

Definition.—Rheumatic inflammation of the aponeurotic parts of the glutei muscles, accompanied by gradually-increasing and intense aching, soreness, or darting pain, extending from the nates to the knee, and sometimes to the ankle. The patient is often obliged to walk very carefully, or is unable to move. Examination will probably discover no redness nor swelling anywhere, not even swelling or thickening of the nerve at the seat of pain, which is usually where a nerve branch passes through a fascia, or out of a bony canal, or lies superficially.

Treatment. — Acon. (recent inflammatory excitement in the nerve-sheath), Coloc., Ars.; Rhus and friction, Cimic. Phyto. (chronic); Staph., Spig., Puls. For other remedies see under "Lumbago." Friction must be judiciously used, otherwise inflammation of the neurilemma may be set up.

Accessory Means. — Liniments, medicated with the same remedy as administered internally, or even simple olive oil, rubbed

into the affected parts, are very useful. The friction should be performed in a warm room, and currents of air guarded against. A wet-compress, simple or medicated, greatly assists the cure. In this and other varieties of muscular Rheumatism, rest and warmth are of great importance. The application of the common flat iron of the laundry, as hot as can be borne, with flannel between the skin and iron, is very valuable. In Lumbago, nothing is so instantaneously beneficial as strapping the back from the level of the "seat" upwards, in layers that overlap each other, with strips of adhesive-plaster, or warm plaster. A pad of flannel or of unbleached cotton-wool wrapped across the loins, next the skin, is very comforting. Where persons are very liable to Lumbago from slight exposure to cold or damp, wearing a skein of silk round the waist is an excellent preventive. Generous, nutritive diet is desirable. Lemon-juice is a grateful and remedial beverage.

Rheumatism and Muscular Weakness.—Muscular Rheumatism is apt to be confounded with the painful muscular affections following prolonged or excessive exertion, or with the soreness or stiffness which occur during convalescence from any long illness, or accompany general debility. These affections are generally better after the repose of the night, but increase with fatigue; and the pain in the affected part is mitigated by relaxing or supporting it.

Chronic Rheumatism.

Definition.—Chronic pain, with stiffness, swelling, and possibly distortion of various joints.

This is sometimes a sequel of the acute form of Rheumatism, at other times it is a separate constitutional affection, coming on quite independently of any previous attack. It is generally very obstinate, prone to recur, and is often worse at night. In time the affected limbs lose their power of motion, and lameness results; the knee-joint being often affected; sometimes there is emaciation of the muscles; sometimes permanent contraction of a limb, or bony stiffness of the joint. There is but little febrile disorder, no perspiration, and less swelling than in acute Rheumatism.

Treatment.—In the treatment of Chronic Rheumatism, dyspeptic symptoms, often associated with it, are primary considerations, and little hope of a cure can be expected till they are remedied. Suitable medicines will be found in the following list and in the Sections on "Acute Rheumatism" and "Dyspepsia."

Rhus Tox.—When the sheaths of tendons, muscles, etc., are chiefly affected; the pains being worse during rest at night in the warmth of the bed, and on first moving, but wearing off with continued exercise. Creeping sensations may also be present. In rheumatic lameness generally, Rhus is often curative.

Bryonia.—Chiefly when the lower limbs are affected; severe pains down the calf of the leg; shining red swellings, with heat and dryness of the parts; pains aggravated by motion. Indigestion, Constipation, etc., are often associated with the disease.

Aconitum—Is often of service, and sometimes curative. It is more especially adapted to Rheumatism of the shoulder, and of the large joints generally, when there is no rigidity. Rheumatism of the heart, with congestion and sense of anguish; and during febrile disturbance.

K.-Hydriod.—Excruciating pains produced by the least variation or irregularity of motion; inverted hands; swollen, stiffened, almost immovable joints; slightest attempt to rise occasions torture in the lumbar-vertebræ; chronic induration and enlargement of the glandular structures; affection of periosteum, syphilitic complications.

Dulcamara. — Rheumatism from exposure to damp, with œdematous swellings, somewhat relieved by rest.

Pulsatilla.—When the knee, ankle, or instep is affected; and when there are fugitive rheumatic pains in various parts of the body; especially in females with scanty period.

Cimicifuga.—Local forms of Rheumatism, Lumbago, pain in the side; also affections of the heart from Rheumatic fever. Wandering rheumatism is also within the *role* of Cimic.

Phytolacca.—Very useful in chronic cases with stiff joints, and even loss of the use of the limb. When the periostial covering is implicated, Phyto. is strongly indicated.

Arnica.—Stiffness in the large joints; tearing pain in the small, with pricking; sensations as if the parts were bruised; Rheumatism associated with a previous injury.

Causticum has been found useful in "Rheumatism of the joints with swelling and stiffness, contraction of tendons, shooting and tearing pains, especially in scrofulous patients."

Mercurius.—Puffy swelling of the affected parts; the pains feel as if seated in the bones or joints, and are increased by warmth, and at night; there are also chills, and profuse perspiration, which do not give relief.

Sulphur.—Either before or after the above remedies, as an intercurrent, or to complete the cure. It is especially useful in Rheumatism from hereditary taint, or associated with eruptions.

Accessory Means.—Patients who are much afflicted with this complaint should if possible reside in a warm, dry climate. At any rate, such patients should wear flannel or other warm clothing, and guard against atmospheric changes. The feet should be protected from cold and damp. Wet compresses, covered with dry flannel, over the affected joints, are always useful. Sometimes warm baths, especially of salt-water, vapor, or hot-air, are most useful.

Lastly, the diet should be easy of digestion, as attacks are often occasioned by disorders of the stomach. Beer and strong wines should be avoided. Cod-liver oil should be given.

Acute Gout.

Definition.—A specific febrile disease, usually occurring in paroxysms at longer or shorter intervals, characterized by non suppurative inflammation, with considerable redness of certain joints—chiefly of the hands and feet, and, especially in the first attack, of the great toe—with excess of uric acid in the blood. The disease is generally hereditary, and an attack is always associated with derangement of the digestive and other organs.

Symptoms.—As an acute attack of Gout is often occasioned by an excessive debauch, or over-fatigue, impairing the digestion, its onset commonly commences an hour or two after midnight, when Indigestion from a supper or late dinner arrives at its acme. Ordinarily a patient retires to rest in his accustomed health, but awakes early in the morning with severe pain, chiefly in the metatarso-phalangeal joint of the great toe; which on examination is found red, hot, swollen, and so exquisitely tender that the mere

weight of the bedclothes is intolerable, and even the vibration of a heavy footfall in the room causes great discomfort. The veins proceeding from the toe become turgid with blood, and surrounded with more or less œdema. On the first accession of the pain there is generally cold shivering, which gradually subsides as the pain increases, and is followed by symptomatic fever. The patient is perpetually shifting his foot from place to place, and from posture to posture, finding no relief. At length, if suitable precautions are taken, and the foot kept in a horizontal posture, the pains subside in the early part of the day; but at evening an exacerbation takes place, which persists during most of the night, and subsides again towards morning, when sleep, with gentle perspiration, takes place. Sometimes the pains remit so suddenly that the patient attributes the relief to his having at last found an easy posture. The same series of symptoms recur, in a less severe form, for some days and nights, varying considerably in different cases, and being greatly influenced by the treatment adopted; and then the attack passes off, not to return for one, two, or after a first attack, perhaps for three years. After the lapse of years, however, the intervals between the attacks are liable to diminish, until the patient can scarcely ever calculate upon being free. The joints of the fingers and toes become enlarged and disorganized by deposit, within and without the synovial cavity, of a white saline matter, commonly called "chalk-stones," but really urate of soda.

It is not uncommon, even in a first attack of Gout, for both great toes to be implicated, generally alternately, the inflammation rapidly subsiding in one joint to appear in the other, but sometimes simultaneously. In many instances, after first attacks, other joints—the instep, the ankle, the heel, or the knee—are affected at the same time; in rarer cases, some joints of the upper extremities.

Symptoms Preceding an Attack.—Flatulence, Heartburn, Acidity, relaxed or confined bowels, and other disorders of digestion. In some patients the function of breathing is implicated, or the liver deranged; in others the nervous system is involved, with Palpitation; or there may be alternation of the urinary secretion, or a crampy condition of the muscles. Such

symptoms are no doubt consequent on the altered state of the blood, which always exists prior to the development of a gouty paroxysm. Should any organ or function be specially implicated, it is then termed irregular Gout.

DIFFERENCES BETWEEN GOUT AND RHEUMATISM.

GOUT.	RHEUMATISM.
1.—In the earlier attacks, the small joints are affected, the metatarsal joint of the great toe being chiefly implicated.	1.—The large joints are chiefly implicated, several being affected at the same time.
2.—Rarely occurs before puberty, and generally not till from thirty-five to fifty years of age.	2.—Generally occurs in the young, from twenty to thirty years of age, and often earlier.
3.—Is more frequent in men than women, and in the latter rarely till after the cessation of the menstrual function.	3.—Affects men and women equally.
4.—It is often the punishment of an idle, luxurious, and intemperate life.	4.—Is the lot of the poor, the hard-working, the exposed, and the ill-clad.
5.—Is strongly hereditary.	5.—Is but slightly hereditary.
6.—Is associated with chalk-stones in the external ear, on the tops of the fingers, or other situations.	6.—Is never associated with chalk-stones.
7.—A fit of Gout often affords great temporary relief.	7.—An attack of Rheumatism has not one redeeming feature in it.
8.—Is confined to the temperate regions of the world.	8.—Rheumatism appears to prevail in all climates, and has been called an ubiquitous disease.

Among the exciting causes of Gout may be mentioned Indigestion, especially that form of it which favors the production of an excessive amount of acidity, and tending to the insolubility and deposition of the urate of soda in the tissues. During an attack of gout, uric acid is said to be absent from the urine, the kidneys not excreting it; hence it collects in the blood, and may be detected by the microscope in minute crystals upon threads immersed in the serum, after the addition of a little Hydrochloric Acid.

Season and climate have much influence in exciting a paroxysm

of Gout. First attacks are most common in spring; as the disease becomes more confirmed, an autumnal seizure is added; after the lapse of a long time, a fit may occur at any season, and at most irregular intervals.

Treatment.—*Colchicum.*—This remedy bears a homœopathic relationship to Gout, and is best administered in comparatively large, and frequently-repeated doses, as follows: Twenty drops of the strong tincture to a tumblerful of water, giving a dessert-spoonful every twenty, thirty, or sixty minutes, according to the intensity of the pain, and until it subsides. Colchicum is a drug used both in the new and in the old school of medicine, with this difference, that all the good effects of the remedy are secured by the small doses of the former, without any of the injury the large doses of the latter entail.

Accessory Measures.—During an attack of Gout, the affected limb should be raised, so as to favor the free return of blood to the heart; the application of flannels wrung out of hot water, hot bread-and-water poultices, after immersion in hot water, often do good; or the Acetic Acid lotion, before recommended, may be used. In acute attacks the patient should be restricted to farinaceous diet—arrowroot, tapioca, sago, bread, etc.—and milk; water, or toast-and-water, *ad libitum*. As the febrile symptoms decline, a more generous diet may be gradually allowed; at the same time the patient should resume daily moderate out-of-door exercise as early as he is able.

Preventive Treatment.— 1st. *A Well-chosen Diet.* — This should include both animal and vegetable food, be adapted in quality and quantity to the ability of the stomach to digest, and at the same time furnish sufficient nourishment out of which pure blood can be formed. Soles, whiting, and codfish; mutton, tender beef, fowl, and game may be eaten. Salmon, veal, pork, cheese, and highly-seasoned dishes are unsuitable. The consumption of animal food should be moderate, and acidity guarded against by avoiding pastry, greasy or twice-cooked meat, raw vegetables, highly-seasoned food, and anything likely to lead the patient to eat more than is strictly moderate. The wines most likely to injure are port, sherry, and madeira. If wine be taken at all, good claret, free from sugar and acidity, is best. When

Gout attacks a patient early, entire abstinence from all alcoholic beverages is one of the most likely measures to check its future development; but aged persons, and others whose health has been much enfeebled, may be allowed a small quantity of stimulants, such as the particular circumstances of each case seem to justify.

2nd. *Healthy Action of the Skin.*—This should be promoted by bathing, warm clothing, crash towels, bath-brushes, etc., for much excrementitious matter is got rid of in this manner. Friction over the whole surface of the body is extremely useful when exercise cannot be taken. The patient should be well rubbed with a flesh-brush, or with the hands, twice a day.

3rd. *Good Habits.*—A life of indolence should be exchanged for one of activity and usefulness. Exercise, not severe or exhausting, should be taken regularly. Walking, so as to secure an abundance of fresh air, must ever be considered the best exercise, but it may be conjoined with riding. Without sufficient exercise, probably every other measure will be unavailing. Early and regular hours should be adopted, and severe or prolonged mental application avoided. In some cases, removal to a warm and dry climate during winter and spring may ward off subsequent attacks.

Chronic Gout.

Definition.—A persistent constitutional affection, characterized by stiffness and swelling of various joints, with deposits of urate of soda.

Symptoms.—The deposits in the joints constitute the distinguishing feature; chronic stiffness and swelling of various joints, with pain, are considered as cases of Chronic Rheumatism. The original condition of the Chalkstone deposits is that of a liquid, rendered more or less opalescent from the presence of acicular crystals; as the fluid part is absorbed, the consistence becomes creamy, and at last a solid concretion is produced. When the effusion is confined to the cartilages, unless very excessive, the injury to the mobility of the joint is comparatively slight; but when the ligaments are infiltrated, they are made rigid, and the play of the parts is consequently interfered with. If a bursa has

been infiltrated, the resulting chalkstone is free and of uniform composition, but the distortion is considerable. The visible occurrence of chalkstones is not constant, but when external deposits do occur in any patient, no possible doubt can exist as to the nature of the case, for, as the deposition of urate of soda in the tissues occurs only in Gout, its presence constitutes a pathognomonic sign (*Garrod.*)

Treatment—Leading Indications.—*Colchicum.*—This drug exerts a powerful influence in diminishing the sub-acute inflammation in old-standing cases.

Pulsatilla.—Wandering pains, especially when those dyspeptic symptoms exist for which this remedy is suited.

Antimonium Crud. — Gastric derangements, nausea, white-coated tongue; pains increase after eating; gouty nodes.

Nux Vomica.—Sub-acute attacks brought on or aggravated by indulgence in wine, heavy suppers, or late dinners. Constipation, Piles, Spasms, etc., are additional indications.

Treatment of Gouty Deposits. — The following simple method Dr. Broadbent has found effectual:—Wrap the hands in linen or flannel dripping with water, warm or cold, and enclose them in a waterproof bag all night. This very speedily removes inflammatory stiffness, and, little by little, the concretions of urate of soda soften, frequently disappearing entirely. Dr. Broadbent has, in other cases, applied alkaline solutions, and water acidulated with Nitric Acid, to one hand, while water alone has been applied to the other, and has come to the conclusion that water is the agent in the process of removal. Urate of soda is soluble in a sufficient quantity of water. When once deposited around the joints it is extra-vascular, and not readily acted on through the blood, but water being absorbed by the skin effects its solution, and when dissolved it is carried away.

Cancer—Malignant Disease.

Definition.—A deposit or growth of non-uniform cells which tends to spread indefinitely by infiltration into the surrounding structures, and in the course of the lymphatics of the part affected, to reproduce itself in remote parts of the body, irrespective of the

tissue invaded, and to proceed to ulceration and ultimate exhaustion of the system.

Varieties.—There are several varieties of Cancer, but the principal are Scirrhous, Medullary, Melanotic, Epithelial, and Osteoid. The first two are by far the most frequent.

DISTINCTIONS BETWEEN MALIGNANT AND NON-MALIGNANT TUMORS.

Malignant or cancerous tumors differ from non-malignant in several important respects, chiefly in the following:—

MALIGNANT TUMORS.	NON-MALIGNANT TUMORS.
1.—Are of constitutional origin.	1.—Originate in some local error of growth.
2.—Are not surrounded by any cyst, but invade the surrounding tissues, and convert them into a structure like their own.	2.—Are limited by a cyst, and although they may compress they cannot invade the neighboring tissues.
3.—Increase constantly and often rapidly.	3.—Have an uncertain period of increase, after which they may remain stationary.
4.—Are attended with severe pain, which gradually increases in severity.	4.—Are usually unattended with pain.
5.—Extend to remote parts of the body, and reappear there chiefly in the course of the lymphatic glands.	5.—Are local, and have no disposition to spread to distant parts of the body.
6.—Are associated with an impaired state of the general health, called the cancerous cachexia.	6.—May impair or obstruct the function of parts upon which they press, but such inconveniences cease when the tumors are removed.
7.—Return, in the same or other parts, if extirpated, and prove fatal in the end.	7.—If effectually removed do not return either in the same or in any other part.

Constitution and Cachexia.—Cancer is in the strictest sense constitutional. By this we mean that a special constitutional condition precedes the formation of a local cancerous growth. It has long been believed that Cancer was hereditary, but recent investigations have shown this opinion to be unsupported by facts. The cancerous cachexia may be induced by excessive mental pressure, especially if associated with anxiety. Indigestion follows,

with loss of nourishment, and the cancerous cachexia results. It is in the condition that precedes Cancer that we can effect the greatest good; for if we can lighten the pressure from the brain and the heart, prescribe rest and change, and correct the Indigestion by our remedies, we may probably avert the development of the cachexia. But when the cachexia exists, a trifling cause may act as an excitant; a gall-stone, or direct disturbance of the liver may fix the disease in that gland, or a blow may determine the growth of Cancer in the breast. When once a true cancer-growth exists, the opportunity for curative treatment has probably passed, although much may be done to mitigate pain, improve health, and prolong life.

Treatment.—The treatment cannot be commenced too early, for cure involves the destruction or elimination of the morbid tendency. Whether or not there is any remedy known which is capable of this, is a disputed point. Many vaunted remedies have disappointed those who trusted in them, while others have failed in some cases though they were useful in others. We can assert, however, from our own experience in numerous cases, that the sufferings attendant on this malady may be greatly alleviated, and life prolonged, by the use of our remedies, even when it is impossible to effect a cure.

Arsenicum. — In many cases in our own practice we have witnessed the priceless value of this remedy, in different attenuations, perseveringly administered, by its causing arrest of the growth, and the gradual dispersion of cancerous enlargements; these cases having been marked by the severe pain and the general cachexia of true Cancer. The utility of this drug is also often expressed by the restoration and maintenance of the patient's general health. Ars. in low dilutions we have found most remedial.

Hydrastis has been much extolled, and is undoubtedly useful when the Cancer involves the glands or the uterus. We use it both internally and externally.

Conium.—Scirrhus of the breast, following a local injury.

Carbo Animalis has effected much improvement in the discharges of Cancer, and has also revived the dormant energies of the system.

Thuya may be chiefly depended on in the simpler varieties, as in epithelial Cancer.

Aurum.—Cancerous affection of the bones.

Aconitum.—The writer in a recent case of Cancer, of very virulent character, found the strong tincture of Acon. of more service than any other remedy. Its power in relieving the agonizing sufferings of the patient was striking; even when Opium, Morphia, etc., by hypodermic injection, could not be borne, Acon. lulled the pain, calmed the nervous excitement, and procured that much-needed blessing, sleep. It was given at first in half-drop doses of the strong tincture, and gradually increased till two or three drops could be taken.

Lapis Albus has acquired some repute in uterine Cancer in the hands of Dr. Grauvogl.

Accessory Measures.—In ulcerated cancerous tumors the fœtor may be greatly diminished; and the patient's and attendant's comfort promoted, by solutions of Carbolic Acid, used locally, and diffused through the room by the spray-producer; also the internal and external use of Carbo Vegetabilis or Charcoal. Charcoal poultices are soothing, Chlorate of Potash in small crystals or powder may be sprinkled over open sores, and covered with a wet compress. Glycerole of Tannin and Glycerole of Carbolic Acid, mixed, are useful for uterine Cancer. Freshly-ground Coffee is a deodorizer.

Operative Measures.—Connected with Cancer, the conideration of extirpation by the knife is important, and an opinion as to its desirableness can only be arrived at by the nature and circumstances of each case. Life is undoubtedly sometimes prolonged by removal of a cancerous tumor, and although it return afterwards, the operation is now quite painless, and the addition thus made to life may be one of comfort and usefulness. There is also the chance that the tumor may not be Cancer, but a non-malignant growth which excision might cure. On the other hand, extirpation of the tumor cannot remove the true cancerous cachexia; a patient may sink under the operation—indeed, patients have sunk from operations for tumors that afterwards proved to be non-malignant. Excision with local anæsthesia has been succesful when general anæthesia was unadvisable.

Syphilis.—Venereal Disease.

Definition.—A specific ulcer or chancre, produced only by contagion, generally from impure sexual connection, which poisons the blood and induces successive groups of morbid phenomena for an indefinite period.

Primary Syphilis is the name given to the disease while limited to the part inoculated and the lymphatic glands connected with it.

Secondary or Constitutional Syphilis describes the disease when it affects the parts not directly inoculated.

In these two stages the disease is contagious.

Tertiary Syphilis is a term used to express symptoms which arise later in the disease, after an interval of apparent freedom,—tissue changes resulting from tainted blood.

The primary stage of this disease is more prolonged than of any other specific fevers. "As is the case in the other Zymotic diseases, the poison of Syphilis is one which possesses the power of breeding in the patient's body, and the smallest possible quantity of virus suffices in due time to inoculate all the solids and fluids of the system. The time required, however, is much longer, and the stages are much more protracted. Instead of counting days, we have to count by weeks and even months. It follows that because the disease extends over years, its subject is often not incapacitated by it for social life; many, whilst still infected, become parents, and transmit their own taints to their offspring." (*Hutchinson.*)

Symptoms.—In primary syphilis a small red spot grows into a nearly round Ulcer, having hard, clearly-cut edges, and a greyish base. This Ulcer discharges, and often gives rise to the secondary form. The lymphatic glands in the locality of the Ulcer become hard, without much inflammation or tendency to suppuration. A febrile condition, never severe, accompanies these changes, while there is generally an enlargement of the lymphatic glands in all parts. Secondary symptoms include eruption of a copper color; Ulcers in the tonsils; skin eruptions, or growths of a warty character; Inflammation of some of the membranes of the eye; pains in the bones and joints; febrile disturbance; Alopecia; etc. In the Tertiary form there are Ulcerations of the mouth and throat,

tending to spread; Ulcerations on the skin; diseases of the periosteum, cellular tissue, muscles, tendons, bones, etc.

Diagnosis.—The skin is the favorite seat of the first manifestation of constitutional Syphilis, as it is the most superficial of tissues, and the effects of the disease gradually appear in the deeper. Antecedent or concomitant symptoms, and some slight points of color and form, usually enable us to make the diagnosis, which is a matter of vital importance. The great chronicity, the tendency to relapse, the dull coppery hue, rounded form, proneness to appear on the face, and absence of itching, may be taken as diagnostic. The concurrence of periosteal pain, Sore throat, or Iritis, makes the nature of the case quite certain. Tenderness on and under the sternum is often present, and has been said to be pathognomonic.

Epitome of Treatment.—1. *Primary Syphilis.*—Merc.-S., Ac.-Nit., Merc.-Cor., Thuya, Ars.-Iod., Sulph.

2. *Secondary Syphilis.*—Ac.-Nit., K.-Hydriod., Merc., K.-Chlor., Ars., Aur.

3. *Tertiary Syphilis.*—K.-Hydriod., Aur., Phos., Ac.-Phos., Ars.

Strict cleanliness is indispensable.

Prompt professsional homœopathic treatment at the outset is generally sucessful in eradicating the disease; and in the later stages professional skill is no less important. (See Franklin on Venereal Diseases.)

Lupus.

Definition.—A spreading tuberculous Inflammation and infiltration of the skin, usually of the nose or face, tending to destructive Ulceration, chiefly affecting women of a strumous constitution.

Symptoms.—Lupus "begins either as a shining, soft, circumscribed swelling of the skin, usually on one ala of the nose, which ulcerates; or else as a mere crack or small excoriation, covered with a thin scab, under which it slowly spreads. When the scab is removed, the discharge, which is scanty and viscid, soon dries and forms another large one. The Ulcer is constantly spreading in one direction, and healing in another; it may last for years, and wander over the whole face, completely destroying perhaps the

alæ of the nose, or the eyelids, but in other parts not penetrating the entire thickness of the true skin. The cicatrix is excessively irregular and shining, of a dense whiteness, causing perhaps eversion of the eyelids and distortion of the features; in some parts it feels soft and pulpy. The cause and pathology of this affection are unknown."

Treatment.—*Arsenicum.*—This is the chief remedy, and by its persevering use, both internally (in various dilutions) and externally, we have witnessed most unpromising cases cured, or greatly benefited.

Iod., K.-Hydriod., Hydras., Ferri Iod., and Sulph. are also useful. All the remedies may be used locally as well as administered internally.

Scrofula.

Definition.—A constitutional disease, marked by abnormal nutrition and production of cells, resulting either in the deposit of tubercle, or in specific forms of inflammation or ulceration. It may be associated with Tuberculosis, or it may occur without.

(*a*) *Scrofula with Tubercle.*—It is at present uncertain whether Scrofula and Tuberculosis are different diseases or not; but it is highly probable that the disease of the blood which leads to the growth of tubercle, and that which gives the specific character of scrofulous affections, are identical.

Tubercles are about as large as millet-seeds, and are of two varieties –the grey and yellow: the former is semi-transparent and somewhat firm; the latter of a dull yellow color, and of a cheesy consistence. The yellow has in it far greater elements of danger: softening takes place earlier, and it has a greater tendency to aggregate in masses. Frequently the two varieties are mixed; but as cases advance towards a fatal termination, the yellow appears to gain the ascendency. Many pathologists are of the opinion that the yellow is simply the grey tubercle in a state of caseous degeneration, and that an uncertain interval elapses before the degeneration occurs.

Tubercles are usually produced slowly and painlessly, during some period of defective health, and after remaining latent for an indefinite time they waste, or calcify, if the general health improves,

or soften and cause Abscesses and other destructive changes, if the health deteriorates. Unlike Cancer, tubercle has no elements of reproduction.

The practical conclusions of Laennec, Clark, Bennett, Pollock, and other scientific observers are, that if the further growth of tubercle can be arrested, those already existing may diminish in size, become absorbed, and the parts cicatrize; or they may remain dormant, without exciting any symptoms, after undergoing a process called cretification, in which the animal portion is absorbed, the earthy only remaining. Frequently, however, from defective hygienic conditions, or other cause, tubercles undergo a succession of changes; they first become soft in the center, that part being the oldest and most removed from living influences; then, like foreign bodies, they excite inflammation, suppuration, and ulceration in the neighboring tissue. The groups often continue to enlarge till several groups communicate and form a vomica; this bursts, and when the lungs are the organs involved, its contents are discharged into an adjacent bronchial tube, and the matter is conveyed into the windpipe, and thence to the mouth, to be evacuated. Unless the disease be arrested, other Abscesses form and unite, till the lung-substance is so diminished in volume, and its continuity so completely destroyed, as to be incompatible with life, and the patient dies of exhaustion. In other cases, the tubercular matter, with the inflammatory products it excited, are removed by expectoration or absorption, the tissues around the cavity contract and obliterate it, and so the disease is cured.

The parts most commonly affected by tubercle are—the lungs, the brain and its membranes, the intestines, the liver, the pericardium, and the peritoneum.

(*b*) *Scrofula without Tubercle* is usually manifested by various local lesions, the most common of which is induration and enlargement of the sub-cutaneous glands of the neck, below the jaws, in the axillæ, or groins, and less frequently in other parts of the body. These swellings are at first soft, painless, movable; afterwards they may enlarge, become painful, inflame, and eventually suppurate, forming scrofulous Ulcers. They occur very frequently during childhood, and are excited into activity by Cold, Measles, Scarlatina, Whooping-cough, etc., and either remain for a long

time inoperative, or proceed to inflammation and suppuration. Not that all enlargements of the lymphatic vessels and glands are due to Scrofula; they may arise from temporary causes, and their character as such is readily determined by the history and symptoms they present.

Other symptoms of Struma are—scrofulous Ophthalmia; Otorrhœa; Ozæna; a large and tumid abdomen; swellings and Caries bones, White-swellings, and Hip-joint disease; diseases of the testicle and mammary gland; various cutaneous diseases; disordered dentition, infantile Convulsions, and acute Hydrocephalus.

Causes.—The most important predisposing cause is hereditary tendency. But the following may be both predisposing and exciting causes, and their power in the production of Struma can hardly be overstated:—

Want of pure air, consequent on the imperfect ventilation of sitting and sleeping rooms, is a frequent and potent exciting cause of tubercular disease, as indeed might be inferred from the physiological evidence of the extreme importance of a proper aeration of the blood. Persons breathing, for a considerable period, air which has been rendered impure by respiration, soon become pale, partially lose their appetite, and gradually decline in strength and spirits.

Unhealthy occupations rank among the predisposing causes of scrofulous diseases. But occupations are only injurious to health incidentally, and the chief circumstances which render them so are mostly preventable, and are, briefly, the following:—deficiency of sunlight and pure air, the inhalation of mechanical or poisonous substances, too prolonged hours of work, a bad posture of the body during labor, and the intemperance, and consequent poverty, of those engaged in them. Out-door occupations are much less likely to produce scrofulous or tuberculous diseases than those practiced indoors.

A deficient supply, or an improper quality of food, may serve as an exciting cause, although probably to a less extent than causes already pointed out.

Treatment.—The perfection of the treatment of Scrofula and tubercle, as, indeed, of disease in general, lies in its adaptation to individual cases. The stock whence the patient has sprung,

the circumstances of birth and early life, education and general habits, the influences of soil and climate, the diseases passed through, the tendency to disease of the body generally, and of organs and tissues in particular,—these are but illustrations of the points that have to be brought under consideration before a course of treatment can be prudently decided upon. The treatment is generally tedious, often requiring to be continued for months, or even for years.

a. The Tubercular Disorder.—A dose of one of the following medicines may be given once or twice daily, as exerting a favorable influence over the cachexia. As it is often desirable to persevere with one remedy for a long period, it is necessary occasionally to suspend its use for a few days, then to administer a dose or two of an intercurrent medicine, such as Sulphur; and again, after waiting a few days, to resume the former remedy. The most useful remedies are—Calc.-C., Sulph., Iod., Ferr., Phos., Ars., and Merc.

Calcarea—Is well adapted to those constitutions in which the digestion and assimilation of food does not lead to the formation of good blood and healthy tissues; there is an impoverished, or, on the other hand, a stout, soft, and pale appearance, notwithstanding that a sufficient supply of good food is taken. It is indicated in the cases of enlarged and hard abdomen, so frequently met with in children with a tuberculous tendency. Other indications for this remedy are —a want of firmness of the bones, slow or difficult dentition, scrofulous swellings, extreme sensitiveness to cold and damp, and, in females, too frequent and profuse period.

Sulphur.—Unhealthy skin; Scrofulous Ophthalmia of children; humid eruptions behind, or purulent discharge from the ears; swelling of the axillary glands, tonsils, nose, or upper lip; swelling of the knee, hip, or other joints; defective nutrition; colicky pains, mucous discharges, etc.

Phosphorus. —Frequently and easily disordered lungs, with a short, dry cough, pain or soreness of the chest, shortness of breath, tendency to diarrhœa or perspiration, and general feebleness of constitution.

Arsenicum. — This is one of the most important remedial

agents in Scrofula, when debility is very marked, and the patient has frequent and exhausting discharge from the bowels, sallow complexion, and emaciation.

Merc.-Iod. and Silicea are suitable adjuncts in many cases.

Ferr.-Iod.—Is of great value in the anœmic, impoverished, and cachectic conditions so common in Scrofula and Tuberculosis, arising from imperfect assimilation of food.

Belladonna.—When sensitive organs are affected, such as the eye, the ear, and the throat, with heat, redness, and pain in the eye, and great intolerance of light; neuralgic pains; sore throat, rendering swallowing difficult; painful swelling of the parotid and other glands; etc.

Silicea.—Scrofulous ulcers with callous edges, fistulous ulcers, Scald-head, Otorrhœa; scrofulous affections of the bones. It may follow Calc., especially in diseases of the bones.

Mercurius.—Glandular inflammations with much swelling, redness, and the pains worse at night in bed, particularly when the glands of the neck are swollen and painful, and there are strumous affections of the eyes; copious saliva; disagreeable taste, and frequent and unhealthy-looking stools.

Sepia.—Females, with menstrual irregularities, corrosive leucorrhœa, indurations of the uterus, unclear skin, etc.

Iodine.—Enlargement of the glands; scrofulous inflammation of the knee; rough, dry skin; enlarged mesenteric glands, and tender abdomen; emaciated appearance, with hectic. A chronic diarrhœa, premonitory of consumption of the bowels, is well met by this remedy.

b. The Indigestion.—In order to correct the derangements of the digestive tract — which have an important bearing on the development of the tubercular predisposition — choice may be made from the following short list of remedies:—

Nux Vomica.—Indigestion with flatulence, heartburn, acid eructations, and Constipation or irregular action of the bowels. It is specially indicated in patients of dark complexion, sallow skin, of sedentary habits, or who suffer much from mental fatigue or anxiety.

Calcarea Carb.—In addition to the indications before pointed out, this remedy is useful in obstinate acid eructations not cured

by Nux V., and when a debilitating relaxation of the bowels is present.

Mercurius.—Faulty action of the liver, shown in yellowish skin and conjunctivæ, mental depression, anorexia, etc.

Accessory Means.—These are of the greatest importance, for medicines will be of little use unless hygienic rules are strictly adhered to.

Air.—Pure fresh air is required night and day. Scrofulous residents are rarely found near the sea-side. The larger the sleeping rooms the better; the fire-places should be open, the temperature about 55 deg.

Exercise.—Moderate exercise in the open air is most essential; and in carrying out this suggestion the patient should endeavor to take exercise with the mind agreeably occupied, rather than following it as an irksome task. Moderate gymnastic exercises are beneficial; but profuse perspiration should be avoided.

Food.—The food of scrofulous patients should always be of the most nutritious character, light, and digestible. Beef, mutton, venison, and fowls, are the best kind of animal food; to these should be added preparations of eggs and milk, a due quantity of bread, mealy potatoes, rice, and other farinaceous principles, as more suited to this class of patients than watery and succulent vegetables.

Cod-liver oil, as a supplemental article of diet, is an agent possessing such remarkable and well-known properties of arresting general or local emaciation as not to require further recommendation here. It may be given in almost any case in which a patient is losing flesh, in teaspoonful doses, two or three times a day, commencing even with half a teaspoonful, if it be found at first to disagree.

Bathing, both in fresh and salt water, is invaluable, as a means of promoting a healthy action of the skin, and of imparting tone to the whole system.

Clothing should be adapted to the season, and should be warm without being oppressive. The extremities especially should be kept warm. Flannel should be worn; in winter it affords direct warmth, and in summer it tends to neutralize the effects of sudden changes of temperature. The linen should be frequently changed, always observing that it is put on perfectly dry.

Prevention. — The prevention of strumous diseases consists not alone in the hygienic or medical treatment of the patients, but primarily in the correction of the habits and improving the health of the parents, more particularly in respect to the points referred to under "Causes."

Scrofulous Ophthalmia.

Definition. — Inflammation of the conjunctiva — the mucous membrane which lines the inner surface of the eyelids and the front part of the globe of the eye — occurring in young persons advancing towards puberty, and in children of scrofulous constitution, living chiefly in low, badly-drained situations.

Symptoms. — The three prominent symptoms are — extreme intolerance of light, so that the child obstinately holds its head down, and can only open its eyes with the greatest difficulty; spasmodic contraction of the obicularis palpebrarum muscle, the lids being everted by the spasmodic action; profuse flowing of tears, so that the skin of the cheeks is often excoriated or covered with an itching eruption; and when, at length, the eyes are opened, there is nothing to be seen at all commensurate with that dread of light which the patient manifests, for it is more a nervous than a vascular disease. These symptoms are generally accompanied by others which mark the scrofulous constitution — enlargement of the absorbent glands about the neck, sore ears, a large abdomen, etc.

Causes. — As stated, the predisposing cause is a strumous habit; the exciting causes are — exposure to bright light, cold, irritating vapors, neglect of cleanliness, etc.

Treatment. — *Mercurius Cor.* — Severe acute attacks, with extreme intolerance of light. In the 2x dil., administered early, it often cuts the disease short.

Belladonna. — In less severe forms of the disease than that for which Merc.-Cor. is prescribed.

Euphrasia. — Profuse discharge of tears. It is most useful at the commencement of the disease, but requires to be followed by some deeper-acting constitutional remedy.

Arsenicum. — Extremely obstinate cases, in which other remedies have been unsuccessful.

Sulphur.—Chiefly valuable in the Ophthalmia of unhealthy, strumous patients, but is often useful in every kind of Inflammation affecting the various tissues of the eye.

Calcarea Carb.—Inflammation of the eyes, with swelling of the glands, and other marks of the scrofulous constitution.

Accessory Means.—As a lotion, warm water should frequently be applied during the acute stage, or tepid milk-and-water. Much comfort may also be derived from holding the eyes over the vapor from hot water. The eyes should be protected by a shade. Wholesome nourishing food, including cod-liver oil, and pure country or sea air, are essential.

Scrofulous Disease of Glands.

Definition.—These terms include all those affections of the lymphatic glands—enlargement, induration, and suppuration—which arise from the scrofulous cachexia.

Symptoms.—The gland slowly enlarges, becomes hard, and is painless up to a certain point; afterwards Inflammation, pain, and suppuration occur, the pus being curdy and ill-conditioned, probably from the growth of tubercular matter; and when the wound is healed, a marked and, frequently, protuberant cicatrix remains. In other cases, however, the gland remains enlarged, without proceeding to suppuration. The glands most commonly affected are those in the neck, under the jaw, the axillary, and the inguinal. The disease is usually confined to children and young persons.

Epitome of Treatment.—1. *Acute Inflammatory Symptoms.* Bell., Hep.- S., Sil. Also wet compress, poultice, fomentation, etc.

2. *Chronic Enlargement.* — Iod., Merc.-Iod., K.-Hydriod., Ammon.-Mur. (indurated), Phyto., Calc.-C., Sulph. Nourishing diet; cod-liver oil, pure air, sunlight, with the general treatment prescribed for "Scrofula."

Pulmonary Consumption.

Definition.—A wasting constitutional disease, in which the lungs are destroyed by the caseous degeneration of morbid deposits—tubercles, pneumonic exudations, etc.—and consequent

ulceration. The terms Tubercular Disease, Tuberculosis, and Phthisis are synonomous.

Pathology.—The nature of tubercle is stated in the Section on "Scrofula." The frequent manifestation of this scrofulous or tuberculous cachexia in the lungs is probably owing to the great vascularity of these organs, their loose and spongy texture, and their ceaseless movements.

Symptoms. The early indications are often obscure, and may appear at any age, but most frequently between twenty and thirty. The chief symptoms are impaired digestion –loss of appetite, red or furred tongue, thirst, nausea, vomiting, and, in rare cases, Gastralgia; more or less cough, chiefly in the morning; hoarseness or weakness of voice; irregular pains in the chest; dyspnœa on slight exertion; debility, languor, and palpitation; persistently accelerated pulse; heightened temperature; night sweats; and progressive emaciation.

The gums should be examined to detect a red line next the teeth; and the nails, to observe if they are curved downwards at their ends (filbert nails); for both these are common in Phthisis. Inquiry should also be made if any members of the patient's family have died from this disease.

Cough is a prominent symptom. In the early stage it is dry, short and irritative, and most troublesome in the morning, or after exertion; the expectoration is usually small in quantity, and consists of ropy or glairy mucus; the cough may continue for months without aggravation or the supervention of any other symptom. In a more advanced stage, cough recurs during the day, and especially after slight exertion, being caused by the necessity for getting rid of the inflammatory products and disintegrated lung tissue, which then begin to accumulate. The recognition of this different variety of cough is necessary in order to prescribe for its cure and relief, as remedies suited to one condition are inadmissible in the other. The mere existence of a cough, *per se*, by no means proves that Consumption is present, as it may arise from diseases of other organs than the lungs; neither does the absence of cough prove the non-existence of the disease.

Hæmoptysis frequently, but not invariably, occurs; it is a

suspicious symptom, and often gives the patient the first intimation of danger; its occurrence either before or soon after the commencement of a cough always renders Consumption probable, especially if the patient has received no injury of the chest, and has no disease of the heart, or of the uterine system.

In phthisical Hæmoptysis the amount of blood discharged is sometimes very small in the early stage, merely streaking the sputa, or there may be a few teaspoonfuls, proceeding only from the small vessels that are congested in the neighborhood of the tubercles; but in the latter stages there is sometimes a copious and even fatal Hæmoptysis, arising from some large vessel being opened by Ulceration and rupture of an artery in a vomica; but this is comparatively rare, because the vessels usually become plugged with coagula before the Ulceration opens them.

A persistent rapidity of the pulse, ranging from 90 to 120, or higher, is an invariable symptom of active Phthisis. The pulse is especially liable to become accelerated towards evening, and, as the disease advances, becomes more rapid and also feebler.

Shortness of breath or difficult breathing is a common early symptom. In Phthisis the capacity of the lungs is diminished, and enough air is not inspired to aerate the blood sent there by the quickened action of the heart. An extensive growth of tubercle in the lungs gives rise to very great distress in breathing; this symptom becomes, therefore, a sign of the extent of the deposit. The number of respirations in healthy, tranquil breathing is 14 to 18 per minute, and bears a remarkable proportion to the pulsations of the heart; that is, one complete respiration to about every five beats of the heart. In Phthisis the number of respirations is from 24 to 28, the number increasing as the disease progresses. Inspiration is generally short, limited, and speedily checked, causing uneasiness or inducing coughing, and is quickly succeeded by expiration. The patient complains of want of breath; exercise, especially going uphill or upstairs, or walking fast, exhausts him, and he often requires to rest. The patient's feelings cannot here be relied upon, for the sense of dyspnœa may be experienced when the function of respiration is unimpaired; and, on the other hand, one lung may have become useless by slow compression without any such distress for breath. The rate

of progress, and not the actual advance of the disease, therefore, determines the degree of the patient's distress. A lowered respiratory power tends of itself to induce accumulations of mucus in the air-cells, and to excite inflammatory action.

Emaciation, one of the earliest symptoms, extends to nearly every tissue of the body, the adipose, the muscular, and the bony; even the intestines and the skin become thinner; it often proceeds uniformly from the commencement to the termination, and appears to bear a closer connection with the constitutional than with the local affection. Though liable to be increased by extensive disease of the lungs, intestines, and mesenteric glands, and by Hectic fever, still, in the absence of these conditions in their ordinary intense form, wasting goes on to the fatal termination, the patient sustaining a total loss of from one-third to half of his entire weight. Slow and gradual emaciation—"the grain-by-grain decay"—is far more indicative of Phthisis than a rapid or irregular diminution of weight; and emaciation is more marked, and also more dangerous, in individuals who have been previously stout. To detect the continuously progressive emaciation, it is necessary to have patients accurately weighed from time to time. By this means a physician is also able to judge of the proportion of the weight of a patient to his height, age, breathing, and other functions.

Hectic fever, at length, makes its appearance, and its coincidence with the symptoms already mentioned confirms our diagnosis of Consumption. The patient is feverish and flushed in the evening, and in the morning is found drenched with perspiration. The pulse is small and weak, uniformly too high, but greatly accelerated towards evening, reaching 120 beats in the minute, or more; "the beat being performed with a jerk, as if the result of irritation upon a weakened heart." The bowels are relaxed, especially in advanced stages of the disease, the Diarrhœa aggravating the effects of the sweating, and consequently the exhaustion is greater; the tongue is furred white or brown in the center, but unnaturally red around the tip and edges, and, immediately preceding the final break-up, is covered with the eruption of Thrush. The urine deposits red brick-dust or pink sediment, consisting of the urates of soda and ammonia; the skin is clammy,

except during the evening exacerbation, when it is burning hot; the complexion is clear, the eyes are bright and sparkling, and there is marked emaciation, especially as death approaches.

Finally, all the symptoms are gradually intensified; the dyspnœa becomes very distressing, so that the patient is unable to make any active exertion, or even to read a short paragraph without pausing; the sputa is more purulent; the pus is often expectorated pure, in roundish masses, that remain distinct in the vessel; the disease often spreads to other organs, as the lymphatic system and the intestinal canal, in which a deposit of tubercle takes place similar to that in the lungs, and which afterwards bursts into the intestines, leaving an Ulcer; and thus the entire alimentary canal is affected, and Diarrhœa produced. The respiratory mucous membrane may also be ulcerated, producing huskiness, and even loss of voice, but more frequently the former, from the thickening and increase in vascularity which it undergoes. Aphthœ of the mouth, pharynx, etc., or œdema of the lower extremities, ensue. It is, therefore, but seldom that the local affection of the lungs alone causes death.

The mind usually remains bright, often vigorous, and so hopeful that, even amidst this general wreck of the material frame, the patient dreads not the future, and thinks he "would be well but for his Cough;" towards the end, however, slight Delirium sometimes occurs, from circulation of venous blood in the brain, or a deposit of tubercles in its membranes.

The most characteristic symptoms are—undue shortness of breath after exercise; Cough; excessive sensitiveness to cold air; Spitting of blood; progressive emaciation; heightened temperature; rapid pulse; Hectic Diarrhœa, and Aphthœ.

Temperature.—The value of the aid of the thermometer in the diagnosis of Phthisis will be recognized by the fact that during the growth of tubercle in the lungs, or in any organ of the body, the temperature of the patient is raised from 98 deg. Fahr., the normal temperature, to 102 or 103 deg., or even 104 deg., the temperature increasing in proportion to the rapidity of tubercular growth. This sign may occasionally be detected several weeks before reduced weight or other signs indicate the undoubted existence of tubercle; and, in the absence of other

signs peculiar to the disease, will determine the diagnosis of Consumption from Chlorosis or Heart-disease.

Treatment. Phthisis being a disease in which the assistance of a medical man is necessarily required, we only give a few general indications for the sake of those to whom professional homœopathic skill is not accessible. Each case must be treated according to the individual nature and extent of the local and constitutional disease. Useful remedies may be found among those recommended for "Dyspepsia;" also "Bronchitis," "Pneumonia," and other diseases of the respiratory system. Preventive treatment is of great importance.

Leading Indications.—*Calc. Carb.*—Imperfect digestion and assimilation of food; obstinate acid eructations, relaxed bowels; enlarged glands; sensitiveness to cold and damp; fatigue after slight exertion; Cough; gradual emaciation; and, in females, too frequent and profuse menstruation, or Leucorrhœa.

Phosphorus.—In confirmed, as well as incipient Consumption, especially in girls of a delicate constitution; with frequent, dry, short Cough, so constant as to lead to exhaustion of strength; or moist Cough with greenish fœtid expectoration from an Abscess in the lungs; shortness of breath; tendency to Diarrhœa or perspiration; emaciation; pain and soreness of the chest; loss of appetite; dry or hot skin; small and quick pulse; etc.

Iodium.—Consumption associated with glandular affections—enlargement or atrophy—diarrhœa from mesenteric disease, and inability to digest fat; laryngeal or tracheal symptoms.

Ferrum.—Anæmia, Diarrhœa, œdema of the lower extremities, emaciation. Ferr. is required in most cases for the constitutional condition.

Pulsatilla.—This drug is adapted to that form of Indigestion in which fat, an important constituent of a mixed diet, is distasteful, and is not taken without more or less derangement of the mucous membranes.

Hyoscyamus.—Night-cough, especially when the cough commences or is aggravated on lying down.

Bryonia.—Tearing dry Cough, as if the chest or the head would burst by the effort; stitching pains in the sides, catching the breath; dyspnœa.

Arsenicum. — Tightness of the chest; oppressed breathing, aggravated by lying down; chilliness in the chest; or soreness and burning from coughing; exhausting Diarrhœa; rapid emaciation; depression of spirits. Ars. is valuable in all stages of the disease, and especially in the last.

Hepar Sulph. — Scrofulous persons, in the early stage. The chief symptoms are — hoarse, rough, or weak voice; hollow Cough, with expectoration of mucus, sometimes of blood; dyspnœa, especially on lying down; night sweats; pain after the smallest quantity of food; clay-colored or greenish stools.

Sulphur.—Valuable for the constitutional condition; also as an intercurrent remedy throughout the disease.

Aconitum.—Is a prominent remedy in Consumption, and its occasional administration during the whole course of the disease is attended with the best results. It is especially valuable in removing Congestion, and modifying inflammatory and febrile action. Physicians of the old school were formerly accustomed, and in many cases are so still, to use depletory measures—leeches, cupping-glasses, etc.—to diminish local Congestion; but, thanks to Homœopathy, in Aconite we have a remedy which answers this purpose better than the lancet or the leech, without the consequent loss of strength.

Inhalation (see p. 50.) is often a useful method for administering such remedies as Iodine, Kreasote, Aconite, Bryonia, Hyoscyamus, Belladonna, Ipecacuanha, Sulphurous Acid, etc., especially when the throat and large bronchial tubes are involved. Apart from medicines, the simple vapor of hot water is of great utility; it soothes the inflamed mucous membrane, and assists in detaching mucus from the air passages. Dr. Berkart has successfully injected highly-diluted Ac.-Carbol. into the lungs through the thoracic parietes.

General Measures.—To describe in detail the general treatment of consumptive patients were to write a treatise on hygiene; we shall therefore only mention several of the most important points, and refer the reader to the Section on "Scrofula."

1. *Nutritious Food.*—The diet should be nourishing, digestible, and sufficiently abundant; including animal food twice or thrice a day; fish, especially oysters; good home-made bread, not less

than one day old; puddings of arrowroot, rice, sago, or tapioca, with milk; various kinds of green vegetables and mealy potatoes; good milk, eggs raw or beaten up with a little milk; and, if the patient is benefited by its use, a moderate allowance of beer, wine, or rum and milk. Pork should be avoided; also veal; fish not having scales; pastry; and all articles that give rise to irritability of the stomach, nausea, eructations, or any other symptoms of Indigestion.

Cod-liver oil must be considered as an item of food, and a very important one; and if properly administered may be expected to be productive of the happiest results. If, as is occasionally the case, cod-liver oil disagree with the stomach, the author has found Cream of great value as a substitute, though it is inferior. To favor its digestion, a teaspoonful of French brandy, or a tablespoonful of cold, strong black tea, may be mixed with it.

2. *Clothing.*—This should be sufficiently warm to maintain a vigorous cutaneous circulation; the extremities especially should be kept warm, to obviate Congestion in the chest or abdomen. Flannel should be worn both in summer and winter; in the former it neutralizes any variation of temperature, and prevents sudden cooling by evaporation of the perspiration: in the latter it prevents loss of the vital warmth of the body. In winter, the addition of a chamois leather vest may be worn over the flannel. The notion that delicate children may be hardened by habitually exposing them to atmospheric changes, when but imperfectly clad, is erroneous in all cases; and in the instance of children of tuberculous predisposition often leads to the worst results.

3. *Bathing and Friction of the Skin.*—Except in confirmed cases, bathing is generally beneficial; even sea-bathing may be often recommended. But on no account should the patient bathe when exhausted by fatigue, or when the body is cooling after perspiration. When sea-bathing is not admissible, sponging the chest and back with water to which sea-salt has been added, can generally be borne and enjoyed; and when it is followed by a general glow, it is a most valuable aid in promoting the capillary circulation. Under all circumstances, vigorous friction should immediately follow the bath, as reaction is thus rendered more complete. In cases in which patients are prevented from taking

exercise, friction by means of bath-sheets or flesh-gloves is the more indispensable. Bathing must be regarded as injurious if after a brief immersion the surface remains cold, numb, and pale, in spite of the use of good friction. In such cases, warm salt-baths are recommended.

4. *Exercise.*—Next to diet, the unrestrained exercise of the muscles and lungs in the pure open air is of the greatest importance. If possible, exercise should be so taken as to bring all the muscles into moderate and agreeable action, and with the body in an erect posture. Walking exercise secures these conditions to a certain extent; but riding on horseback has the advantage of permitting the patient to breathe a large amount of fresh air, while it does not occasion fatigue or great difficulty of breathing. Rowing and gymnastic exercises are valuable aids when practiced according to the patient's strength. But excessive exertion, either of the mind or body, should be avoided, and an interest fostered in the wonders and beauties of nature—the garden, the farm, the mountain-side, and the river.

Preventive Treatment.—There is an antecedent condition of tubercular Phthisis in which treatment is most hopeful, which is characterized by Indigestion, furred tongue, failing appetite, dislike to fatty kinds of food, pallor, and loss of strength. This, the antecedent stage, is the most important for treatment; and that treatment includes the prescription of remedies, fresh air, and healthy occupation for improving the nutrition of the patient. In short, the early adoption of all those general measures which have just been pointed out.

In conclusion, all excesses must be avoided, whether in wine, the pleasures of the table, exercise, or in the gratification of any passion which over-stimulates the mind or the body. Business and intellectual pursuits should not be followed to the extent of inducing mental or bodily fatigue, but should be laid aside as early in the day as possible, and while there is sufficient strength remaining to permit the patient to engage in healthy exercise.

Tabes Mesenterica—Consumption of the Bowels—Marasmus.

Definition.—A growth of tubercle in the mesenteric glands, which undergoes changes similar to those in the lungs, and is also

associated with the phenomena of Scrofula. Unless arrested, the disease results in the destruction of the glands, and, consequently, in the death of the patient, from inability to repair the waste of the tissues of the body.

Symptoms.—Swollen and tense abdomen; irregular action, or, more generally, relaxation of the bowels, with unhealthy, fœtid stools; passage of undigested food; pain in the bowels, so that the patient draws his legs up towards the abdomen; at the same time he is feverish and indisposed to activity. There is also pale and flabby skin; anxious and aged expression; inordinate or fitful appetite. The process of absorption becomes suspended, so that the quantity of nutriment added to the blood is inadequate to the requirements of the system; Hectic fever sets in, with obstinate Diarrhœa, extreme thirst, restlessness, and sleeplessness; the body wastes until the degree of emaciation becomes extreme, hence the term *tabes* (to melt away); and the patient dies, in most cases, from actual starvation. If, however, treatment is resorted to before the glands are irreparably disorganized, the patient slowly recovers.

Treatment.—The remedies required in this affection are the same as those recommended in the Section on Scrofula, especially Iod., Ars., Calc.-C., and Sulph.

The best hope of cure is in early and judicious treatment; the disease, however, is so serious, that it should only be confided to a homœopathic practitioner.

Accessory Means.—The food should be nourishing and simple, fresh meat, goats' milk, beef-tea, soda-water or lime-water with milk, and cod-liver oil. Warm clothing, including a flannel bandage around the abdomen, to guard against the vicissitudes of the weather. See also the Accessory treatment of "Scrofula."

Diabetes Mellitus.

Definition.—A cachetic, constitutional disease, characterized by an excessive discharge of pale, sweet, and heavy urine, containing grape sugar.

Symptoms.—*Malaise*, excessive debility and progressive emaciation; red and fissured tongue, enlarged papillæ circumvallatæ, intense thirst, frequent micturition; voracious appetite, and

sinking at the stomach; the bowels are usually costive, the evacuations dry and hard; the skin is harsh and dry; and the breath has a peculiar smell like chloroform. Boils, or Carbuncles, swelling of the legs, etc., sometimes accompany the disease. In advanced stages, some low form of lung Inflammation, or Phthisis, are not infrequent complications. The insatiable thirst uninterruptedly torturing the patient, is a highly characteristic symptom. The temperature is almost uniformly below the normal, rarely 97 deg. Fahr., and sometimes being as low as 94 deg. or 95 deg. Even in that most frequent complication of Diabetes, Phthisis, the temperature, instead of being raised, is generally below the normal point.

The quantity of urine is generally in great excess, amounting to from eight to twenty or even thirty pints daily, inducing frequent calls to micturate day and night, and producing soreness and Inflammation of the urethra. Thirty pints of urine of the specific gravity of 1·040, which is about the heaviest, contains nearly four pounds of sugar. In a few months patients often pass a quantity of sugar equal in weight to that of their own bodies.

Diabetic Test.—Diabetic urine is of a pale straw-color, has a faint smell of apple, hay, or milk, is of high specific gravity (1·025 to 1·050), and is passed in large quantities. When there are excessive discharges of urine, especially if associated with the above symptoms, an examination of the urine should be made. There are various tests for diabetic sugar, but the one most readily practiced is Trommer's, and is as follows: —Half fill a test-tube with the urine to be examined, and add about two drops of a solution of sulphate of copper to make it slightly blue, and then excess of liquor potassæ enough to clear it, by re-dissolving the precipitate which it at first produces. Let it boil up once over a flame, and if there be sugar, there will appear a reddish-brown precipitate of the sub-oxide of copper; but if there be no sugar, a precipitate of black oxide of copper.

The urine should be examined more than once, because the presence may have arisen from some unusual article of diet, and be only temporary. Excessive discharges of urine may also occur in Hysteria, Diabetes Insipidus, and other disorders. The most

certain information concerning diabetic urine, however, may be obtained from its gravity, which varies from 1·025 to 1·040 or upwards, according to the quantity of sugar it contains. Whenever the urinometer (page 33) stands above 1·030, we may conclude that sugar is present.

Diabetes Insipidus.—In this affection the quantity of urine is largely increased, but it is clear and colorless, of low specific gravity (1·003 to 1·007), and is devoid of sugar and albumen. Thirst; a dry harsh skin; and mental and physical weakness are generally present.

Cause.—A defect in the function of digestion, so that sugar, which ought to be available for the maintenance of the body, enters the blood and leaves it again unchanged, and is discharged in the urine. And here we refer not merely to sugar which is taken as such into the mouth, but to that which is formed out of the starch contained in food by the action of the saliva.

Treatment - Leading Indications. — *Acidum Phosphoricum.*—This medicine, with attention to dyspeptic symptoms, generally relieves, and not unfrequently cures. The special symptoms calling for it are, frequent urging to urinate, pain in the loins, emaciation, and prostration; it is particularly valuable in cases of a nervous origin. Immediate improvement ensues, both in general health and in the condition of the urine. In one case reported, "at the end of the fourth week the sp. gr. was 1·018, and there was less sugar by about one-fourth. After the lapse of four months the patient was perfectly well." We have found that great benefit follows from the administration of this remedy in the 1x dilution, several times a day.

Uranium Nit.—This medicine has sometimes proved efficacious. Dr. Cornell has furnished us with interesting details of several bad cases cured by it. Dr. Holland has also reported to us a case in which, under Uran.-Nit., Ac.-Phos., and bran biscuits instead of ordinary bread, the urine was reduced in four months in quantity from four quarts to three pints, and in sp. gr. from 1·048 to 1·025. The strength returned with great rapidity, the general healthy appearance was restored, and there was no relapse. The *Lancet* gives details of a recent cure by Uran. Nit. On February 18th, 1874, 1-6 gr. was given in water three times a

day, and from that date gradually raised to 1-3 gr. A week later the patient was much better, and by the end of the second week the bowels were regular, the appetite and quantity of urine no longer excessive. The usual diet was then resumed, and muscular weakness alone remained.

Helonin has been successfully administered by Drs. Hale and Payne. Muriate of Quinine is found to remove sugar from the urine. Plumbum also promises to be a successful remedy; its action is specifically on the kidneys.

Ars., Dig., Nux., Canth., Eup.-Pur., Chim., or Merc., are often required to meet special symptoms.

Accessory Treatment. — Amylaceous food, and every substance containing sugar, or that is readily convertible into it, should be avoided. The most nutritious food should be preferred, and the greater proportion consumed in the fresh state. Fat meat, fish, oysters, eggs, milk, good soups thickened with finely-powdered bran, cocoa prepared from the nibs, lettuce with oil, vinegar, etc., may be taken, if they agree, and be varied to suit the patient. The action of all articles must be watched, and anything that occasions indigestion or increased saccharine secretion avoided. As a substitute for ordinary bread, which is inadmissible, bran bread or bran cakes, with eggs, are recommended. "Diabetic bread" made of the following ingredients bears a closer resemblance to ordinary brown bread than any previously suggested, and is often found more palatable; to eight parts of gluten add two parts of bran nearly free from starch, and a small quantity of butter. It is more nutritious than any other, and prevents or corrects constipation. The excessive thirst of diabetic patients may be gratified, as fluids aid in the elimination of the sugar in the blood, and patients become greatly depressed if they are not allowed to drink as much water as they desire. Warm baths, the use of flannel, and a warm climate are valuable accessories in the cure of Diabetes. Dr. Bouchardat recommends "laborious bodily exercise, especially gymnastics," observing that profuse perspiration on farinaceous food lessened sugar in the urine. The improvement consequent on a course of Carlsbad or Vichy mineral waters is sometimes very marked. Cold winds, sudden draughts, or changes, are injurious.

Skim-milk Treatment.—Several cases have been reported in the medical journals of Diabetes in which the quantity of urine was steadily and greatly diminished, and the specific gravity correspondingly reduced, by restricting the patient to six pints of skimmed milk per day. This treatment is cheap, and patients can adopt it without interfering with their usual occupations. Mr. H. May (Birmingham) gave five pints of milk a day to a diabetic patient, and in six weeks the specific gravity fell from 1·040 to 1·017; the patient at the same time became stout, and stronger than she had been for years. Dr. Donkin has also successfully prescribed it; but he insists that "skim-milk loses its curative power altogether, and becomes valueless as a remedy in Diabetes, when administered in combination with solid animal or other nitrogenous food. By the skim-milk treatment," he says, "I mean the administration of skim-milk properly prepared, in quantities measured and limited to the requirements of individual cases, given at regular intervals in definite doses, and to the exclusion of all other food for a longer or shorter period. This system of treatment, in short, must be pursued in a strictly methodical manner, and according to rule; and if this is not done, success must not be expected." He gives seven to ten pints, according to circumstances, divided into meals taken at regular intervals. Two or three pints may be made into curd, daily, by the essence of rennet. Dropsy has also been very successfully treated with milk diet. Hence we may presume that skim-milk has some physiological effect on the kidney and its secretions. After the skim-milk has been taken for about six weeks, almost every variety of animal food may be taken once, twice, or thrice daily, and bran biscuits, gluten bread, diabetic bread, and dry wines may be added by degrees to the dietary.

Scurvy.

Definition. -"A chronic disease, characterized by sponginess of the gums, and the occurrence of livid patches under the skin, of considerable extent, which are usually harder to the touch than the surrounding tissue."

Causes. The disease arises from a peculiar state of malnutrition, supervening gradually upon the continued use of a dietary

deficient in those salts of acids—citric, acetic, tartaric, lactic, and malic—which are found in fresh vegetables. Death supervenes after a longer or shorter interval, if the conditions under which the disease arose remain unaltered.

Symptoms.—"The condition is essentially marked by a dull leaden pallor of complexion; excessive bodily and mental lethargy; dyspnœa upon slight exertions, unaccounted for by the auscultatory signs; spontaneous effusions of blood-colored fluid into the various tissues of the body, causing petechiæ and bruise-like patches to appear on its surface; together with (commonly) a livid, swollen, and spongy state of the gums, and a disposition for them to bleed upon the slightest irritation." (*Buzzard*).

Treatment.—All that is required to cure a scorbutic patient is the supply of those articles of food fresh vegetables, milk, and good dietary generally which contain elements the absence of which has led to the diseased condition. Eight to twelve ounces of potatoes a day are sufficient to prevent scurvy. Vinegar, lemon-juice, and other vegetable acids are also recommended. An ample supply of these acids, as well as preserved vegetables, should be provided for ships which are engaged in war, or have to make prolonged sojourn where fresh vegetables cannot be obtained. For the ecchymosis and infiltration, compresses moistened with aromatic vinegar, or spirits of Camphor, are very useful. Bry. and Ferr. will correct some of the scorbutic symptoms.

Anæmia.

Definition. — A condition of the blood in which the red corpuscles are deficient, the *liquor sanguinis* watery and the albumen poor.

Symptoms. — The skin, the lips, and the mucous membrane generally have a pallid, bloodless appearance, and the face looks like wax; the lining of the gums and mouth is white, and the tongue is large, flabby, and pale; the pulse is feeble, thready, beats about eighty times in a minute, and is easily excited. The patient becomes very weak and languid, is easily fatigued and loses breath; there is Indigestion, loss of appetite, flatulence, and irregular action of the bowels; in women there is scanty menstruation, Palpitation, deficient temperature of the extremities

and surface, and generally œdema of the ankles, or even of the feet. There may be also dejection of spirits, and morbidly heightened nervous sensibilities.

Causes.—Seclusion from air and sunlight, and a poor quality of food. On these points Dr. Pollock says: "The sufferers are the victims of our subterraneous kitchens and back shops, and of that atrocious domestic system which deprives young women in service of open-air exercise and enjoyments peculiar to their age. Secondarily, a depraved appetite arises, and tea with bread-and-butter come to form their sole diet, as all healthy desire for meat soon vanishes. These devitalized plants, which never see the sun, languish in nervous power, and furnish our worst cases of Hysteria."

Other cases are, copious or frequent small discharges of blood, as in Hæmorrhoids, too profuse menstruation, venesection, etc.; profuse or prolonged evacuation of fluids which contain much of the organic constituents of the blood also gives rise to Anæmia, as in Diarrhœa, Dysentery, Ague, etc.

Anæmia and Consumption.—The diagnosis between these two diseases is easy to the physician, as the physical signs of Consumption are absent in Anæmia. In the latter, the blood is only impoverished; in the former, it is contaminated also; in the latter, the pulse is about normal; in the former, it is accelerated; and, again, in Anæmia the temperature is below the normal standard; whereas in Consumption it is considerably higher.

Epitome of Treatment.—1. *From Loss of Animal Fluids.*—China, Ac.-Phos.

2. *With Scanty or Suppressed Menstruation.*—Puls., Ferr.

3. *From Deficient Open-air Exercise and Sunlight.*—Ferr. and Puls. or Nux V. Nat.-Sulph has been recommended as specific.

Accessory Means.—The above remedies are only prescribed as auxiliaries to the hygienic treatment. Nourishing digestible diet is needful in quantities as large as can be assimilated—milk, eggs, animal broths, and afterwards fish, poultry, game, mutton, etc. Moderate daily out-of-door exercise in a pure air is indispensable; bathing, especially sea-bathing, aids restoration.

Dropsy—General and Local.

Definition.—A serous or watery accumulation in the areolar tissue, more or less general throughout the body, with or without effusion into the serous cavities.

Dropsy is of two distinct varieties, for besides its occurrence in the meshes of the loose tissue beneath the skin, it may take place as a local dropsy in any of the natural cavities or sacs of the body, and is named according to the parts involved. If the accumulation occur in the ventricles of the brain it is called *Hydrocephalus;* if in the membrane that lines the surface of the lungs, *Hydrothorax;* if in the membrane of the heart, *Hydropericardium;* if in the membrane of the intestines, *Ascites;* if in the serous sacs of the joints, *Hydrops Articulorum;* if in that of the testicles, *Hydrocele.*

According to Murchison, there are three forms of dropsy—partial Dropsy, Dropsy at first partial but afterwards becoming general, and dropsy which is general from the first. (1) Partial Dropsy is always due to excessive venous repletion; and this over-distention of the small veins is the result of some mechanical impediment to the venous circulation. Dropsy due to obstructed portal circulation may be recognized by the following clinical characters. It begins in the abdomen; dyspnœa follows, but does not precede Ascites; there is a tendency to Vomiting, Diarrhœa, and Hæmorrhoids, or to Hæmatemesis. Further, the spleen becomes enlarged, and there are Varicose veins on the right side of the abdomen. (2) Dropsy at first partial but afterwards becoming general, commences in the feet and extends upwards; and this is also due to excessive venous repletion, from obstructed venous circulation. But here the obstruction is in the central organ of circulation, and is most frequently mitral disease, or fatty heart, or dilated right side of heart, consequent on chronic Bronchitis and Emphysema. (3) Dropsy invading all parts of the body at once is due to diminished exhalation in one part, leading to compensatory exhalation in another. This is almost invariably renal, and albumen is present in the urine. Here Dropsy results from diminished exhalation of water from the kidneys, and is consequently chiefly met with in those forms of kidney-disease in which the tubes are blocked up by diseased

epithelium or inflammatory products, as in Acute Nephritis and fatty kidney.

Character of the Swellings.—Dropsical swellings are soft, inelastic, diffused, and leave for some time the indentation made by the pressure of a finger In chronic cases, and when the œdema is very great, the skin becomes smooth, glassy, and of a dull-red or purple color, and where the skin is less elastic, as over the tibia, it becomes livid or blackish, and troublesome, even gangrenous, or sloughs may form.

Leading Indications.—*Arsenicum*—Is a most useful remedy in œdema of the face, hands and feet, and Anasarca from disease of the heart; also in Ascites from enlargement of the liver or spleen. It is especially indicated when there is much general debility, rapid emaciation, and anxious depression; constriction and oppression of the chest, and a sensation of suffocation on attempting to lie down; the skin is dry and pale, or burning and itching, and sometimes peels off in large flakes; the tongue is red and parched, sometimes with excessive burning thirst; the pulse feeble and irregular, and the extremities cold.

Digitalis. -According to our experience in numerous cases, this drug is most valuable in almost every variety of Dropsy, and often succeeds admirably in most desperate cases. It is especially indicated by a small, feeble, and irregular pulse, pale face, livid lips, distressing dyspnœa, inability to lie on the back. It benefits dropsical affections from heart or kidney disease by improving the action of these organs.

Apocynum Can.—The value of this remedy is due to its power of restoring the urinary secretions, which it often does rapidly, even after other remedies have proved ineffectual.

Apis. The action of this remedy on the kidneys is sufficient to make it most useful in acute febrile Dropsy from a chill, in post-scarlatinal Dropsy, in that of incipient Bright's disease, and in that which sometimes appears in the later months of pregnancy, laying the foundation of future puerperal Convulsions; sometimes, also, for a time, it removes the œdema of the lower extremities symptomatic of disease of the thoracic organs (*Hughes*). Apis is particularly valuable in Dropsy complicated with Strangury, Suppression, or other urinary difficulties.

Bryonia.—Œdematous swellings of the joints; Hydrothorax; Dropsy or œdema from the retrocession of perspiration or an eruption, or associated with chest symptoms—Cough, dyspnœa—or with Liver-complaint, Constipation, etc.

Helleborus.—Dropsical effusion in the ventricles of the brain (Hydrocephalus), in Hydrothorax and Anasarca, in which it often proves most valuable.

Ferrum.—Functional œdema, especially in anæmic or chlorotic females, with pale and cadaverous skin, feebleness, nausea after eating, Constipation, etc.

Sulphur.—Œdematous swellings following skin affections or suppressed eruptions.

Aconitum.—Chiefly in commencement of Dropsy, and in Dropsy following the sudden retrocession of a rash or perspiration, or associated with Palpitation or organic disease of the heart. In the latter case, in alternation with Digitalis.

Accessory Treatment.—A dry, soft, and moderately warm atmosphere is generally most suitable; and if the Dropsy be at all owing to climatic influences, or to any endemic disease, a change of residence is necessary. A damp climate or soil is particularly unfavorable. In acute Dropsy the diet should be similar to that in acute fever; in chronic Dropsy patients require nourishing diet, but on account of the extreme feebleness commonly present, only easily digestible food should be taken. To allay the burning thirst often experienced, cold water is the best beverage; but any other that the patient desires, if not positively injurious, may be taken. Water may be said to be a real restorative, for it increases the amount of fluids excreted to an extent greater than its own bulk; it also tends to improve the appetite and strengthen the pulse, while it diminishes the dropsical collections. It will thus be seen that the common notion that drinking water increases Dropsy is quite erroneous.

Warm baths for promoting perspiration, tapping, and other palliative measures may sometimes be necessary, but the propriety of such means can only be decided by the circumstances of each individual case.

CHAPTER III.

DISEASES OF THE NERVOUS SYSTEM.

Encephalitis-Meningitis—Inflammation of the Brain.

Definitions.—By "Encephalitis" is meant Inflammation of the Brain or of its Membranes; the term being used only when it is impracticable to diagnose the precise seat of the Inflammation. "Meningitis" signifies Inflammation of the Membranes of the brain. By "Inflammation of the Brain" is meant Inflammation of the brain-substance, with or without implication of the membranes, usually partial, and in many cases dependent on local injury or foreign deposit.

We can only state here the ordinary symptoms which are more or less common to the various inflammations of the brain and its membranes, giving general indications for treatment, which may be of service under circumstances in which a physician's aid is inaccessible.

Symptoms.—In Encephalitis there may be premonitory pains in the head, irritability, sleeplessness, and general indisposition. But usually the disease manifests itself at once –there is high fever, much Headache, Vomiting, Constipation, general sensitiveness both of the skin and the senses –sight, hearing, etc.—and violent Delirium; after a few days the Delirium is less; the patient clutches at the bedclothes or the air, the pupils dilate and contract, and become insensible to light; there is grinding of the teeth, rolling of the head, and somnolence. The respiration is irregular; urine is retained; the bowels are still constipated; and the abdomen may become retracted. Muscular twitchings, Anæsthesia, Spasm or Paralysis supervene, with thready pulse, and Collapse and Coma set in. "The pupils are widely dilated, and are insensible to light, the eyes half open, the face sunk and ghastly, and the skin cold and clammy; the sphincters relax, the urine and fæces pass involuntarily, and the pulse becomes more frequent than before, but small, thready, and uncountable; the breathing is stertorous, and the patient at last dies in a state of complete Coma." (*Ranskill.*)

In Inflammation of the brain-substance only (*Inflammatio*

cerebri) the excitement and Delirum are not so marked, neither does the pulse rise above its normal standard; indeed, it frequently falls below it, and is very irregular. There is also tonic rigidity of one or more limbs, which is succeeded by permanent Paralysis.

Causes.—Amongst the predisposing causes are age, sex, the abuse of alcoholic liquors, excessive grief, and mental work.

The exciting causes are—blows on the head, falls, etc.; and, in hot countries, exposure to the sun. The sudden retrocession of an eruption on the scalp has been known to be followed by acute Meningitis.

Simple Meningitis may occur before birth, and is common in new-born infants, but is more rare after two years of age; the ages between sixteen and forty-five are next most liable; the disease also occurs in the proportion of three males to one female.

Diagnosis.—From Tubercular Meningitis the diagnosis may be made by comparing the two diseases as described; from Delirium Tremens it may be recognized by the absence of Headache in the latter affection, and the previous history of the patient, which "usually tells a long story of inebriations." In Enteric fever there is less Headache, but a more frequent pulse, Diarrhœa, abdominal tenderness, and after the fifth day the peculiar eruption of that disease.

Treatment.—"The treatment of acute Meningitis is only successful when employed very early in the disease, and carried out with energy." The principal remedies are -Acon., Bell., and Bry., or Arn. alternately with Acon., if the disease arises from an injury to the head. Hyos., Opi., Ver.-Vir., and other remedies may sometimes be required: for their indications see Section on "Typhus fever."

Accessory Measures.—The hair should be shaved or cut close, and the extremities kept warm. Cloths wrung out of hot water and renewed as soon as they become cold, allay the inflammation and calm the delirium. Quiet is important, and when there is photophobia the room should be darkened. Beef-tea, strong broths, milk and-soda-water, but no solid food, should be given. Cold water or other simple liquids may be freely given.

The patient's apartment should be well ventilated, and great caution exercised during recovery.

Apoplexy.

Definition.—A condition characterized by the abrupt loss, more or less complete, of consciousness, from extravasation of blood (Hæmorrhage) within the cranium.

Varieties.—(1) Congestive Apoplexy is an overloaded condition of the vessels of the brain. (2) Hæmorrhagic or sanguineous Apoplexy is the most frequent, and consists in the rupture of a vessel, and extravasation of blood in the substance of the brain, or outside the nervous masses. The symptoms are usually sudden, and its development most rapid.

Modes of Attack and Warnings.—Apoplexy may come on suddenly or gradually. The patient may be suddenly struck—falling, at once bereft of motion and consciousness. Such a case is termed Primary Apoplexy. More frequently, however, Apoplexy is indicated by well-marked premonitions, which are, chiefly, Headache; giddiness, particularly on stooping; fullness and pulsation of the blood-vessels of the head; Epistaxis; retinal Hæmorrhage; sleepiness, with heavy or snoring breathing; transient blindness, considerable difference in the sizes of the pupils; deafness, or noises in the ears; momentary loss of consciousness, with or without indistinctness of speech or incoherent talking; flashes, motes, etc., before the eyes; Vomiting, numbness, or tingling in the hands or feet; unsteady gait; partial Paralysis, sometimes involving the muscles of the face, sometimes those of a limb; the patient becomes comatose, and drowsiness gradually increases to perfect Coma. This is called Ingravescent Apoplexy, because the symptoms become worse gradually, and is far more serious than a primary case, because we have evidence that the cause of the symptoms is still in operation, and because such a case is always hæmorrhagic, and the brain has undergone organic and permanent changes. On the other hand, a primary case may be a congestive variety, and the condition may pass off without any permanently injurious result.

Symptoms During a Fit.—These vary according to the seat and amount of the hæmorrhage, and are sometimes so vague that cerebral hæmorrhage can only be suspected. Pain in the head,

giddinesss, faintness, sickness, laboring pulse, succeeded by some reaction, may only be present. In the early stage of an ingravescent case, before the patient becomes comatose, there is great depression in the circulation from the shock to the nervous system; the surface is cold, pale, and clammy, and the pulse frequent, small and weak. As Coma comes on, the pulse becomes full, slow, and labored (passes slowly under the fingers); the surface warm, sometimes preternaturally so, and perspiring; the countenance has a peculiar bloated appearance, and is often congested; the pupils are insensible to light, and usually dilated, although one or both may be contracted; the breathing is stertorous from Paralysis of the soft palate; the urine is retained from inaction of the bladder; and the bowels are sluggish.

One or several of the above symptoms may, however, occur as the consequence of Indigestion. Vomiting and Headache are more important as indications when they come on suddenly without any obvious cause, and not on first rising in the morning; and the vomiting, or efforts at vomiting, are continued beyond the emptying of the stomach; if these symptoms are associated with degeneration of the arteries, and Albuminuria, we may suspect the existence of clots of blood in the brain.

Predisposition.—(1) Age. After fifty, Apoplexy is one of the most frequent causes of death. This arises not so much from the years of a man's life, as from a bad constitution and tissue-depravation, not often present in early life. After the middle period of life, the capillaries become impaired, and, as a consequence, the veins congested. "The cerebral arteries also are often diseased; the heart has often acquired an abnormal power, driving the blood with great violence, and with an increased momentum, towards the brain, while the lungs have their functions so impaired that the blood is only imperfectly oxygenated; and all these are causes of Congestion, and of tendency to rupture of the vessels of the brain (*Aitken*). (2) Intemperance, excessive eating or drinking, uncontrolled passion, pressure about the neck, too close mental labor, or other habits of life that lead to cerebral Congestion. (3) Disease affecting the heart, kidneys, or blood-vessels of the brain, suppressed Hæmorrhoids or menses.

Apoplexy Not Often Suddenly Fatal.—A popular opinion, to some extent shared by the profession, is current that an effusion of blood in the brain is a frequent cause of sudden death. In stories and theatrical representations the characters are made to die suddenly of Apoplexy; in newspapers, too, accounts are often given of sudden deaths attributed to it. This common error has also been fostered by another, equally common, namely, that persons with a short thick neck and red face are most liable to Apoplexy. It is true that such persons often die suddenly, but the suddenness of the death is generally due to heart disease. A man with a red face has no more blood in his head than another with a pale face; and if blood is poured out into the brain it is because the diseased blood-vessel could no longer avert the fatal mischief. It is, then, a person with diseased arteries in whom Apoplexy is likely to occur, and this may exist in those who are pale and thin and have long necks. Dr. Wilks states that he once knew a gentleman who had such an extraordinarily red face that some young friends disliked to walk the streets with him, lest he should die of Apoplexy. This gentleman, whose face was of a deeply purple hue, died of heart-disease. "Although cerebral Hæmorrhage sometimes kills rapidly, it does not kill instantly, as rupture of the aorta, or heart-disease, sometimes does." (*Jackson.*)

Causes.—The main cause of Apoplexy is disease of blood-vessels; hence the increasing liability to it with advancing age. The gradual degeneration or ossification of arteries common to old age renders them inelastic, and as the blood is forced on them by the action of the heart, they give way. Hæmorrhage within the cranium is sometimes caused by the bursting of *Aneurisms* involving the arteries of the brain. The idea that increased pressure on the blood-vessels of the brain, as during exertion or rapid movement of the body, is an originating cause of Apoplexy is incorrect; there must be actual degeneration of the arteries, the process probably of years, before they can give way. The predisposing cause of Apoplexy is general bodily unsoundness, which may be especially due to granular disease of the kidney, or Hypertrophy of the left ventricle of the heart. Apoplexy is almost always the local expression of a general constitutional failure; hence it is classed as a constitutional disease.

Diagnosis.—Apoplexy is distinguished from Epilepsy, in that the latter begins with a scream, is always attended by Convulsions and much frothing at the mouth; symptoms which do not occur in Apoplexy. In distinguishing it from intoxication or poisoning with opium, the history and circumstances of the patient must be considered. Is he likely to have been drinking? Is there any odor of spirits in the breath? Has he been low-spirited or in any difficulties likely to have led him to swallow poison? It is from such circumstances, considered in connection with the entire history of the case, that we must make our diagnosis; the condition of the brain, especially in the advanced stages, being nearly the same in all these cases. The importance of promptly recognizing Apoplexy from alcoholic or narcotic poisons arises from the difference in the immediate measures that would be taken in the one or the other case. An emetic, or the stomach-pump, might remove in the one case what, if suffered to remain, might lead to serious or even fatal results; while in the other case wholly different measures would be necessary. It is obviously far better to mistake drunkenness for Apoplexy than Apoplexy for drunkenness, and when any one is found deeply insensible he should be carefully attended under the direction of a medical man. Even if death could not possibly be averted, it is sad that a human being should die of cerebral Hæmorrhage in a police cell. Under any circumstances, then, an unconscious person needs our care, for he may be so from a combination of causes; a drunken man may have had his blood-vessels ruptured by a blow on the head; or a drunken debauch may coincide with the breaking up of his cerebral arteries.

Treatment—Leading Indications.—*Aconitum.*—A full, rapid, and strong pulse; dry, hot skin. This remedy is suitable for the premonitory symptoms, and for an actual attack, and both immediately and remotely is infinitely superior to the abstraction of ten, sixteen, or twenty ounces of blood; indeed, venesection has been proved by statistics to increase the mortality.

Belladonna.—Red, swollen face, throbbing of the blood-vessels, convulsive movements of the face or limbs, dilation of the pupils, loss of speech, suppression or involuntary discharge of urine, etc.

Opium.—Drowsiness, Stupor, or profound Coma; stertor and irregular breathing; bloated face, stupid and besotted expression, half-open eyes, contracted pupils, cold extremities.

Nux Vomica.—Congestive conditions of the brain, favoring Apoplexy. Even when effusion has taken place it is often the best remedy unless active febrile symptoms call for Acon. Nux V. is particularly valuable for patients who have spent a sedentary life, and indulged in rich diet, wine, etc.

Phosphorus.—This remedy retards or corrects the calcareous degeneration of the arterial blood-vessels, which we have stated to be the great cause of the disease. It may be given when such a change is suspected, and also during recovery from a fit of Apoplexy from that cause.

Administration.—During a paroxysm, one or two drops of the tincture in a teaspoonful of water, or on a small piece of sugar, every fifteen or thirty minutes: in threatened Apoplexy, a dose every hour; as the symptoms are subsiding, every three to six hours.

Accessories During a Fit.—1. If possible, the patient should be immediately conveyed to a large apartment where the cold air can freely circulate around him. 2. The neckerchief, and bandages of every kind, loosened, and the patient placed in a warm bed, with the head moderately raised. 3. Warmth should be applied to the extremities and axillæ, cloths wrung out of hot water, and renewed as soon as they become cool, to the head; and a sinapism to the epigastrium. 4. At the same time, one of the aforementioned medicines should be given, chiefly Acon., Bell., or Opi.

After a Fit.—Should the patient recover from the fit, great and unremitting care must be observed to prevent another attack. The diet should be light, but nourishing; milk, light puddings, cooked vegetables, fish, etc., are extremely valuable; a full animal diet should not be allowed until all fear of a relapse is passed; and stimulants should almost invariably be avoided. Moderate exercise of the muscles is a remedial agent of high value; it tends to promote a more active circulation through the entire system, and, consequently, to diminish the pressure on blood-vessels which a little extra force might cause to give way. If

active exercise cannot be taken, frictions performed by a second person by means of towels or flesh-brushes over the surface of the body and the extremities are necessary. The causes of the disease should as far as possible be avoided or modified.

Preventive Measures.—Undeviating temperance in eating and drinking. Physical and mental exertion and excesses of every nature; fits of passion or excitement; sudden changes of temperature, over-heated rooms, warm baths, wet feet, etc., must be uniformly avoided. Errors in diet, exposure to a hot sun, violent emotions, etc., may excite the gravest symptoms in persons predisposed to Apoplexy.

Sun-stroke—Sun-fever—Heat-stroke.

Definition.—A Paralysis of all the functions of the brain, occurring either gradually or suddenly, excited by heat, sometimes following exposure to the direct rays of the sun, particularly when to heat is added the pressure of tight and unsuitable clothing.

Symptoms.—The affection is generally preceded by premonitory symptoms, such as thirst, heat, and dryness of skin; Vertigo; Congestion of the eyes; frequent desire to micturate; Syncope follows, and is often instantly fatal; or insensibility and stertorous breathing occur, with or without Convulsions. In both varieties the mortality is high, and unexampled Congestion of the lungs is the most common morbid condition found after death.

Causes.—Beside the direct effect of heat, the fatigue consequent on continued physical exertion in a heated atmosphere, combined with breathing vitiated air in crowded apartments, or close hot nurseries, predisposes to an attack.

Treatment.—If there be no convulsions, the patient should be quickly stripped, placed in an empty bath-tub, and suffused over the neck and shoulders till the temperature is reduced below 102 deg. Camph. should be inhaled, and given on sugar. A teaspoonful of brandy-and-water (half of each) may be given instead. When the danger is over, Acon. may be given every ten minutes. If there be convulsions, the patient should be placed in a tepid bath, and cold water added till the temperature of the body is reduced to 98 deg. Camph. and Acon. may be given as

in the other case. Bell. is to be preferred to Acon. if the eyes be staring and glistening.

Special Indications. — *Glonoine.* — Very severe heavy and throbbing pain in the head, particularly at the back; or sudden loss of consciousness.

Belladonna.—Violent dizziness, or sudden falling down as if from Apoplexy; redness of the face.

Camphor.—Great depression of the pulse, and pale face, with violent distress in the head; followed immediately by a reaction—flushed face, accelerated pulse, etc.

The effects may usually be met by Bell., Hyos., or Glon.

Accessory Means. –It is now generally agreed that Sunstroke follows a depressed, and not, as was formerly taught, a stimulated condition of the nervous centres. The treatment, therefore, by the lancet, which a few years since was the orthodox method, and supposed to be strongly "indicated," has been abolished, and that by cold douche, or cold compresses constantly applied over the head, neck, and chest, is almost universally adopted.

Prevention. Clothes should be light and loose, especially avoiding undue pressure on the veins of the neck. Flannel tends to prevent chills. Spirit-drinking should be discontinued, as it undoubtedly predisposes to attacks.

Paralyis—Paralytic Stroke.

Definition.—Paralysis, or Palsy, is a condition in which there is loss of motion, to a variable extent, associated with disease of the brain or spinal cord, from injury to, or pressure upon, a nerve-trunk, or from the action of a poison.

There are many different forms of Paralysis, some of which, with their chief causes, are as follows:—

Hemiplegia is that form of Paralysis in which one lateral half of the body is affected from disease of the opposite half of the brain, the parts generally involved being the upper and lower extremities, the muscles of mastication, and the muscles of one side of the tongue, and the patient is said to have had a "paralytic stroke."

Hemiplegia may be very partial, as when it affects the third nerve only, causing dropping of the upper eyelid, to which that

nerve sends branches, so that it cannot be raised except by the hand. This condition is called Ptosis. The eye is also sometimes turned outwards or inwards (squinting) from a similar affection.

The chief causes are — cerebral Hæmorrhage (Apoplexy), obstruction of the blood vessels of the brain, and consequent cerebral softening. The general pathology and treatment are the same as Apoplexy.

Paraplegia is a form of Paralysis, more or less complete, of the lower half of the body, in which the legs, and perhaps also the rectum and bladder, are implicated. It is caused by disease of the spinal marrow, or of its membranes, or of the vertebræ, so that the marrow is either pressed upon or disorganized. It may also arise as one of the symptoms of chronic cerebral disease.

Facial Paralysis is a local Paralysis of the *portia dura* nerve from cold, and must be distinguished from Hemiplegia, in most cases being quite independent of disease of the brain, and is probably due to swelling of the investing membrane of the bones through which the nerve emerges, or from the pressure of enlarged lymphatic glands, or the sudden exposure of a warm face to a cold draught. Sometimes it is due to growth of tumors at the base of the brain.

The features are drawn up to the opposite side; but there is still sensibility of the skin of the cheek, and the muscles of mastication act.

Other forms of Paralysis may be named: General Paralysis, or Paralysis of the insane; Wasting Palsy; Locomotor Ataxy (Tabes Dorsalis); Infantile Paralysis; Palsy from Lead, Mercury, or other poisons; or from specific disease, as Diphtheritic Paralysis.

Epitome of Treatment.—1. *Facial Paralysis.*—Bary.-Carb., Caust., Bell., Acon.

2. *General Paralysis.*—Phos. (from degeneration); Bary.-Carb. (of old persons); Merc.-Cor., Cocc., Coni.; Plumb. (with wasting).

3. *Hemiplegia.*—Nux. V., Arn. (especially of the left side), Phos. (Tabes Dorsalis).

4. *Paralysis of the Upper Eyelid* (*Ptosis*).—Gels., Spig., Bell. (of the face also); Stram.

5. *Rheumatic Paralysis.*—Rhus, Arn., Acon., Sulph.

6. *Diphtheritic Paralysis.*—Gels., Coni.

7. *Paralysis of Painters.*—Opi., Iod., Cup.-M., Ars.

Accessory Means.—1. Electricity or galvanism, judiciously employed, after the acute inflammatory symptoms have subsided, is an agent of great value. 2. The cold *douche*, bathing with salt water, or, if the patient be capable of the effort, sea-bathing, tends to promote the nutrition of the spinal marrow. 3. Regulated exercise—active when the patient is capable of it, passive when he is not—is of great utility in overcoming muscular rigidity, and restoring the functions of paralyzed limbs. 4. Well-directed frictions and shampooing tend to obviate the injurious results of continued pressure from lying on the paralyzed parts.

Tetanus—Lockjaw.

Definition.—A disease characterized by a contraction of voluntary muscles, general or partial, alternating with relaxation more or less complete, arising from an excited state of the spinal cord and medulla oblongata.

Causes.—Tetanus may be idiopathic—from some disorder of the blood or nervous system; or traumatic, from a wound which produces local nervous irritation. The extraction of a tooth has caused this disease in the author's own experience. It may occur at all ages, but is probably most common in the young, and males are more liable to it than females. Sudden atmospheric changes seem to have considerable influence in producing the disease.

Symptoms.—There may be premonitory indications of an attack, such as fear, or sense of impending danger, or a disturbed state of the digestive organs. But the unmistakable symptoms soon appear, namely, inability to open the mouth fully (Lockjaw); painful expression of the countenance, convulsed or fixed features, the corners of the mouth being drawn up (*risus sardonicus*). When fairly set in, the Spasms of the voluntary muscles are of the most violent character, with much pain, and partial remissions. The pain is of that kind which attends ordinary Cramp in the muscles, as of the legs, and is usually very severe. The breathing becomes loud and sobbing; if the muscles of the trunk are affected the body is jerked forwards (*emprosthotonus*), or backwards (*opisthotonus*), or is perfectly rigid (tonic Spasm), like a piece of

wood. The mind continues clear; and when death ensues, it is from exhaustion consequent on the frequency of the tetanic Spasms (*Erichsen*).

Epitome of Treatment.— 1. *Idiopathic Tetanus.* — Acon. (from exposure); Cham. or Cin. (from worms).

1. *Traumatic Tetanus.*— Nux V. (or Strychnia), Acon., Bell., Ac.-Hydrocy., Arn.

The remedy should be given in a low dilution, and administered every few minutes as soon as the first indications are noticed. Surgical measures are sometimes necessary.

Hydrophobia—Rabies.

Definition.—A disease resulting from the bite of a rabid dog, or from its licking an abraded portion of the skin, the chief characteristics of which are, severe constriction about the throat; spasmodic action of the diaphragm; a peculiar difficulty of swallowing, and consequent dread of fluids; anxiety and restlessness; followed by exhaustion, Delirium, and death.

Symptoms of Rabies in the Dog. — According to Youatt, the earliest are—sullenness, and frequent shifting of posture; loss of appetite; lapping his own urine; disposition to lick cold surfaces, to eat straws, excrementitious matter, and other rubbish, and fighting with his paws at the corners of his mouth. A very early and constant symptom is change of voice, every sound uttered being more or less changed.

The amount of ferocity varies; some show extreme fondness; while others bark and rush to the end of their chain to meet an imaginary foe; or, if loose, rush out, biting every one they meet. There is no dread of water, as in human beings, but, on the contrary, great thirst; and the saliva becomes viscid, and adheres to the mouth. In the last stages of the disease the eyes become dull; the hind legs, and afterwards the muscles of the jaw, are paralyzed; and the animal dies exhausted in from four to six days. Common errors are that no dog is mad which will lap water, that the animals only go mad in the dog days, and that the female dog is not liable to the disease. Muzzling is of little use. Homeless curs are most dangerous, and should be killed off.

Symptoms in Man.—These are not manifested till a period

after receiving the infection, varying from a few weeks to one or two years; the wound having probably healed, and the scar presenting no remarkable appearance. Twitching and itching sensations are sometimes felt in the vicinity of the wound prior to an attack. Sometimes there is stiffness, or numbness, or partial Palsy; or the wound may be red and swollen; there is an indistinct feeling of uneasiness and anxiety, with giddiness, chills, heats, and a general feeling of being unwell. The special symptoms are arranged by Mr. Erichsen under three heads; consisting (1) of a spasmodic affection of the muscles of the throat and chest; the act of swallowing commonly exciting convulsions, makes the patient afraid to repeat the attempt; hence the horror of all liquids which is so remarkable a feature of the disease; (2) an extreme degree of sensibility of the surface of the body; (3) mental agitation and terror, which frequently mark the disease throughout. To these symptoms we may add extreme thirst; the secretion of a remarkably viscid saliva, the effort to swallow which brings on the convulsive fits; Convulsions increasing in frequency and violence; lips and cheeks becoming livid, and perpetually quivering; till, at length, one fit lasts long enough to exhaust the remaining strength.

Cause. - A bite from an animal already affected with Rabies.* Close confinement, want of fresh water, unwholesome food, etc., may have some influence in developing the malady.

Treatment. - Immediately after a person has been bitten by a suspected animal, the wound should be sucked with all the force the patient can command, so as to encourage bleeding and the removal of saliva from the bitten part; and if he is too much alarmed or otherwise unable to do it himself, a friend should do it for him.† A ligature between the wound and the heart would also prevent the absorption of poison into the system. As soon

*"The susceptibility of the human subject to this poison is by no means universal, for only ninety-four persons are known to have died out of one hundred and fifty-three bitten, making the chance of escape nearly as three to two."—*Aitken.*

†No danger attaches to the person thus sucking the wound so long as the poison does not come in contact with any abraded or otherwise imperfect surface of the mouth or other part of the body.

after this as possible a surgeon should excise the wounded part, care being taken to remove every portion touched by the animal and to obtain a clean raw surface. The wound must then be washed by a stream of warm water, and afterwards freely syringed and covered with pure Carbolic Acid.

Remedies.—The chief are—Belladonna, Stramonium, and Scutellaria Lateriflora. These medicines are on no account to supersede the local means just pointed out, but are to be used as additional preventives, or as palliatives.

Belladonna.—According to Hahnemann, this is the most sure preventive; and certainly no other drug has the power of simulating Hydrophobia to the same extent. Several very interesting cases of genuine Rabies, said to have been cured by this drug, are quoted in Hempel's "Materia Medica."

Scutellaria.—In the "New Remedies," Dr. Hale proves that this drug has caused nervous derangements similar to those of Hydrophobia, and cites cases of cure of the disease by this remedy.

Dr. Massy suggests the Turkish Bath at 140 deg. to 170 deg.; with drop doses of Naja Trip. 2. Dr. Buissou recommends the vapor bath.

Precaution.—After a person has been bitten by a suspected dog, the animal should on no account be killed, for after all it may turn out that it was not really mad. By shutting it up and allowing it to live, the non-malignant character of the affection may be ascertained, and the patient's mind relieved of a most harassing fear, that might otherwise have tormented him for months or years.

Epilepsy—Falling-Sickness—Fits.

Definition.—Sudden and complete loss of consciousness and sensibility, with spasmodic contractions of the muscles, lasting one, two, or three minutes, recurring without any typical regularity, and followed by exhaustion and deep sleep. The definite anatomical nature of the lesion is unknown; but there is a high probability that the *Medulla Oblongata* and the base of the brain are the parts from which the excitement of the motor nerves proceeds, which leads to the muscular Spasm.

The Aura Epileptica.—In the majority of cases, the premoni-

tory symptoms are too brief to allow the patient to remove to a convenient place, or even to give an intimation of what is about to happen. In other instances, an approaching seizure is clearly indicated for many minutes, or even hours, before its actual occurrence. The kind of warning is variable in different cases, often consisting of such symptoms as Headache, shooting pains, giddiness, indistinctness of vision, sparks of various colors, humming noises, or loud reports, strong odors, sneezing, strange tastes, hoarseness, irritability, gloomy mood, spectral illusions, etc. But the most striking premonition is that called the *aura epileptica*, a sensation compared to a stream of warm or cold air, to the trickling of water, or to the creeping of an insect, which commences at the extremity of a limb, and gradually runs along the skin towards the head; or, occasionally, it gets no further than the pit of the stomach; and, as soon it stops, the fit occurs. A knowledge of these circumstances is important, as, in some instances, time is afforded to interpose remedies that may avert the paroxysm, or at least to secure the patient's safety during a fit.

A Fit.—The patient utters a loud shriek or scream, and falls suddenly to the earth, convulsed and insensible. The cry is peculiar and often terrifying, not only to mankind, but also to the brute creation. The convulsive movements, especially of the head and neck, are often very extreme, one side being frequently more affected than the other; there is violent closure of the jaws; the tongue is liable to be bitten; a foam issues from the mouth, often colored by blood; the eyes quiver and roll about, or are fixed and staring; the hands are firmly clenched, and the thumbs bent inwards upon the palms; urine, etc., sometimes escape involuntarily; the breathing is impeded by Spasm of the larynx, and performed with a hissing sound; the cheeks and lips are of a deathly pallor, the veins of the neck and forehead are greatly distended, the heart beats tumultuously, and death seems inevitable. Gradually, however, the symptoms remit, and the patient is left insensible and apparently in sound sleep. A fit rarely lasts longer than from one to three minutes, although the painful nature of the spectacle makes it appear longer to a bystander.

Symptoms following a Fit.—Some few patients recover perfectly in a few minutes; some regain consciousness and then

sink into profound sleep; but more frequently consciousness is not immediately recovered, the slumber succeeding the struggles without any lucid interval. On emerging from the slumber the patient may merely feel languid and inert, or like a person stunned, or in a state bordering upon idiocy, unconscious of what has passed.

Grand Mal and Petit Mal.—The fit just described is *le grand mal* of the French; but there is also a milder form of the disease —*le petit mal*—in which there is but slight, or even unobserved, convulsion, only a transient pallor of the face, no bitten tongue, no foam, and but slight and momentary obscuration of the mental faculties. There is an endless variety in this form of the malady. But, although imperfect, it is yet real Epilepsy, and the "*petit mal*" and the "*grand*" often alternate, or the lesser grows into the greater.*

Consequences.—These are generally most disastrous both on the physical and moral condition. Oft-repeated, severe attacks tend to destroy control of the appetite and passions, enfeeble the memory, impair the intellectual faculties, and, in some instances, terminate in irremediable imbecility, or general Paralysis. These patients rarely attain old age.

Causes.—The most common is hereditary tendency. Thus two or more cases may be observed to occur in the same family far more frequently than they would as mere coincidences. Hereditary tendency may be manifested by what has been termed the convertibility of nervous disease. Thus, a choreic patient may beget an epileptic child, or *vice versa*. This holds good of all neurotic diseases. Intermarriage of families having a tendency to nervous disease greatly strengthens the danger to the offspring. The marriage of near relations having such proclivities magnifies the danger immensely. Injuries of the skull; local

*The following is an illustration from Trousseau of the *petit mal*:—A child in the midst of his play stops, slowly turns his head to the right side, and gazes with wide-open eyes. There is no spasm of the facial muscles, but insensibility is at the same time so profound that a needle passed into his flesh is unfelt. In about five seconds the child regains consciousness, but looks perplexed, or as though just awakening from a distressing dream. In a quarter of a minute more the attack is over, and the child resumes his play.

irritation, as a splinter or shot under the skin, or in some internal organ; Tumors; Inflammations; parasites in the brain; malformations of the skull, as one half being unlike the other; osseous deposits within the cranium, especially spicula of bone formed on the inside of the dura mater. In *post-mortem* examinations, the bones of the head are sometimes found thickened or otherwise diseased. It is well known that Epilepsy is most frequent in confirmed lunatics and idiots, as the result of some malformation of the brain. The most frequent exciting causes are—derangement of the nervous or sexual systems,—Hysteria, immoderate sexual indulgence, Self-abuse, and physical and psychical prostration from any cause. The age at which the attacks most frequently commence is from the tenth to the twentieth year, when the important change of puberty takes place. The other most frequent period is from the second to the tenth year, during which the permanent teeth are cut.

Fright, fits of rage, over-straining the mind, gastric disorders, the irritation of worms—especially tænia—menstrual irregularity or suppression, repelled eruptions—especially those about the head—and the sight of other epileptics, are also exciting causes.

Treatment.—*During a Fit.*—The patient's tongue should be put back into his mouth, and a cork or linen pad fixed between his molar teeth; he should be laid on a couch or rug, fresh air freely admitted around him, his head slightly raised, and all ligatures relaxed that interfere with circulation and respiration. Throwing cold water on the face appears to do no good; and restraint should not be exercised beyond what is necessary to prevent exposure, or to guard against injury. In Epilepsy preceded by the *aura*, a firm ligature applied above the part where the sensation is felt, or the immediate inhalation of the vapor of Nitrite of Amyl, is said to prevent the attack. After the fit, the patient should be allowed to pass the period of sleep which usually follows without disturbance.

Between the Fits. In addition to the administration of any remedy indicated, an endeavor should be made to discover, and then if possible to remove, the cause of the malady. But a cure is not always possible; and the obscurity which often surrounds the etiology of Epilepsy should tone down our prognosis of cure.

Homœopathy, however, contrasts most favorably with Allopathy; even when cure is out of the question, the striking relief afforded is worth all the pains taken to obtain it.

Leading Indications.—*Belladonna.*—Sparkling of the eyes, dilated pupils, intolerance of light, flushes of heat in the head, and redness of the face, startings at the least noise, and other symptoms of cerebral congestion. If administered as soon as the indications of an attack are noticed, it may ward it off, or mitigate its severity. Hughes suggests Glon. for this purpose. Bell. is also useful when Epilepsy occurs during teething.

Cuprum.—Indicated in preference to Bell. by paleness of the face, and by extreme severity of the Convulsions.

Chamomilla.—Epilepsy in irritable children; the attacks are often preceded by colicky pains, sour vomitings, and paleness of one cheek and redness of the other.

Kali Brom. — This remedy is largely prescribed both by homœopathic and allopathic physicians; and certainly, in numerous instances, it tends to diminish the severity of the attacks, and to lessen their frequency. The drug is not suited for attacks of the *petit mal*, and its effects are most striking in recent cases. Its administration may be commenced in ten-grain doses three times a day, and, if necessary, the dose may be subsequently increased. After using this drug for a considerable time, in varying doses, we have not found its beneficial results more marked than those of the commonly-used remedies, especially Bell., Opi., and Ars., and as troublesome complications sometimes arise from its use before good effects are obtained, we do not recommend its indiscriminate use.

Kali Hydriod.—Dr. T. K. Chambers recommends this drug as curative in recent cases, and ameliorative in chronic, and gives in his lectures interesting illustrative examples. We have used it with benefit in chronic cases.

[Mono Bromide of Camphor will be found useful in *petit mal.*]

Artemesia Vulg.—Fits recurring every three to five weeks. Epilepsy from a suppressed eruption or discharge; or in scrofulous persons, and chronic cases. Under these conditions Calcarea is also valuable.

Accessory Means.—Hygienic treatment, especially such as the

causes of the disease suggest, is of great importance. Regular healthy exercise is beneficial, but it should never be carried too far, as fatigue often excites an attack. Epileptic patients require much rest and frequent change; boys and girls should not on any account sit at lessons for three or four consecutive hours.

Should fright, disappointment, anxiety, or other mental influences tend to keep up the disease, a thorough change is necessary, including change of residence, companions, and habits. All ambitious intellectual exertion, especially rapid reading and writing against time, should be absolutely prohibited. But "moderate employment of the thoughts, especially on familiar and interesting hobbies, is useful in preventing that stagnation or concentration of the mind upon itself which is so hurtful in all chronic complaints" (*Chambers*). Besides, the mind requires pabulum and exercise for its healthy growth. The diet should be nourishing and taken regularly, in moderate quantities, including animal food once or twice a day. As the appetite is often voracious, it should be judiciously controlled. Cold sponge-baths taken quickly, and followed by abundant friction, are favorable; but shower-baths do not usually agree, and bathing in the open sea is dangerous. All violent emotions, excesses of every kind, more especially sexual, should be strictly interdicted.

Hypochondriasis.

Definition.—A functional disorder of the nervous system, attended with exaggerated ideas or depressed feelings, but without actual disorder of the intellect.

Symptoms.—The patient imagines himself, without sufficient ground, the subject of some serious disease, and is often haunted with the dread of insanity or of death. Frequently, at first, the patient considers himself dyspeptic from the fact that he is troubled with flatulence, has a furred tongue, foul breath, irregular appetite, and generally obstinate constipation. After a time he complains of a gnawing or burning pain, of uneasiness at the pit of the stomach, or of more serious disease. He has great hope of getting rid of his malady, and strong faith, notwithstanding repeated failures, in treatment. Afterwards, from attention being directed to particular organs, functional disturb-

ances arise,—flushes, palpitation, suppression of bile, or bilious diarrhœa; symptoms which tend to confirm the belief that organic disease exists.

Causes. — Hereditary influences are potent and common: a taint of insanity, or other grave nervous disease, may be generally traced in near or remote ancestors. The development of the disease is usually in connection with the conditions of middle life, especially indolence and luxury; or, on the other hand, with anxiety and conscious failure in efforts to provide for relations and dependents. Severe shocks of a moral or emotional nature may give rise to the malady. The patient's complaints may, however, be not merely fanciful, but due to actual disease. Organic diseases of the liver or stomach are especially likely to evoke the symptoms of Hypochondriasis, or they may arise, or be excited into new action, by a concurrent morbid process. The statements and symptoms of a hypochondriac should therefore be carefully examined. It is often said that reading medical books frightens persons into the disease. This cause must, however, be very limited and trifling compared with the more potent and general operation of such influences as grief, fatigue, the failure of efforts, or the miserable and heart-wearying habits of an idle life.

Treatment—Special Indications.—*Nux Vom.*—Hypochondriasis associated with affections of the liver, irritability, and fractious disposition.

Aurum.—Melancholy, which nothing seems to affect; loathing of life, or a suicidal tendency; religious melancholy; uneasiness, apprehensiveness, sullenness, and indisposition to conversation.

Arsenicum.—Melancholy, with debility; also for the burning pains sometimes complained of.

Ignatia.—Dejection caused by the loss of friends, pecuniary disappointments, or other depressing circumstances.

Pulsatilla.—Patients inclined to weep, and of a quiet and gentle disposition, the reverse of the Nux Vom. temperament.

Platina.—Where the dejection is caused by derangements of the uterine functions, especially at the change of life. Sepia and Anacardium are also useful under similar conditions.

Accessory Means.—The weary mind should be relieved, and vigor of body and cheerfulness of spirits secured by a course of

out-of-door exercises, physical training, bathing, and suitable dietetic arrangements. Horse-back exercise is particularly advantageous. Exercise should be employed in such a manner as may be amusing to the patient, and to the extent of the healthy action of the muscles, but never sufficient to produce severe fatigue. If Indigestion exist, the article on that subject should be consulted. Hypochondriasis from sexual vices requires the aid of a physician.

Neuralgia.

Definition.—Severe darting, stabbing, or burning pain along a nerve-trunk or its branches, chiefly affecting those of the head and face, recurring in paroxysms, at regular or irregular intervals; in recent cases the periods of intermission are comparatively free from suffering; but in chronic cases, more or less persistent local pain and mischief occur, from some morbid condition of the nerves of sensation, produced by a local, or more frequently a general, affection.

Varieties.—The chief superficial Neuralgias are the following: (1) Facial Neuralgia—the branches of the fifth pair of nerves are the seat of the pain; any one, or in rare cases, all three, of its divisions may be involved; it is commonly recognized as Tic-douloureux, and more frequently affects women than men. (2) Hemicrania, Megrim, or Brow-Ague—the seat of pain is on one side of the head, just above the eyebrow. (3) Intercostal Neuralgia, or Pleurodynia—often associated with an eruption of clustered vesicles (Herpes zoster). (4) Sciatica—Neuralgia affecting the sciatic nerve from the nates to the knee, and sometimes to the ankle; often associated with Rheumatism, indeed most frequently caused by it.

Of the visceral Neuralgias we may mention Gastrodynia—the disease being located in the nerves of the stomach; Angina pectoris—the cardiac nerves being involved; Hepatic—the nerves of the liver; Ovarian—those of the ovary; Testicular—those of the testicle.

Of all the varieties of Neuralgia, those described as Tic-douloureux or tri-facial Neuralgia, and Sciatica, are most frequent.

Diagnosis.—Neuralgia may be distinguished from Rheuma-

tism by its paroxysmal character, and by the absence of swelling of the parts affected.

Symptoms.—Darting or shooting pain in the course of a nerve, of different degrees of intensity, at times almost unendurable; the severe form generally comes on suddenly, and is of a sharp, darting, or tearing character, coursing along the trunk or ramifications of the affected nerve. Sometimes there is spasm in the muscles that are supplied by the nerve thus affected; in some cases, heat and redness of the surface, with augmented secretion from the neighboring organs, as a flow of saliva or tears when the nerves of the jaw or eyes are implicated; in others, and this is very common, especially in chronic cases, there are "tender spots at various points where the affected nerves pass from a deeper to a more superficial level, and particularly where they emerge from bony canals, or pierce fibrous fasciæ" (*Anstie*). In many cases a paroxysm of Neuralgia is preceded by anæsthesia or diminished sensibility of the nerves of feeling. A frequent, if not an invariable, concomitant symptom is general or local debility. It is true, Neuralgia is sometimes supposed to be associated with muscular vigor or robustness, but a close examination will almost uniformly reveal evidences of deterioration in the nervous system. This is confirmed by the very common observation, that depressing agents—as bodily fatigue, or mental anxiety—act as exciting causes of Neuralgia, or aggravate an existing attack.

The duration of Neuralgia is very uncertain; an attack may pass off after a few paroxysms, or it may persist for many days or months, with a well-marked, or irregular, intermittent, or remittent character.

Neuralgia and Gray Hair.—The hair undergoes remarkable changes under the influence of Neuralgia. Dr. Anstie noted grayness of hair on the same side in eleven instances out of twenty: seven of these were cases of Neuralgia of the ophthalmic division of the fifth nerve; in four of these cases there was grayness of part of the eyebrow on the affected side. The same observer has also noted fluctuation of the color, the grayness actually increasing during, and for some time after, an acute paroxysm, the hair subsequently returning more or less to its natural color.

Causes.—These may be hereditary, constitutional, or local. Neuralgia is distinctly hereditary, occurring in particular families, and appearing in successive generations. It is well known, also, that such neuralgic families are liable to the more profound derangements of the nervous system Paralysis, Epilepsy, Hypochondriasis, and even softening of the brain and Insanity—indicating some congenital imperfections in the formation of the nerve-cells and fibres. This seems to be proved by the fact that, though a precisely similar accident occur to a hundred persons, not more than two or three will experience any Neuralgia; and these will probably be found to belong to a neuralgic family.

Constitutional causes are —Impairment of the general health; depressing influences, whether mental or physical, as night-watching, sleeplessness, anxiety, insufficient nourishment, or violent exertion; hæmorrhage and consequent debility; affections of the alimentary or urinary organs; exposure to wet and cold—to strong and cold winds, which are frequent causes of irritation to the animal nervous system; a gouty, rheumatic or syphilitic taint; decay or loss of teeth; malaria; and, lastly, organic degeneration at the decline of life, which is the most severe and intractable form presented to the physician. The great majority of patients is found among the hard-working, the poor, and the badly-nourished classes; men suffering less frequently than women. The cause of this is, that men are better protected, both naturally and artificially, from the effects of exposure, and that women are tempted to indulge in brief exposures in the open air from warm rooms without any suitable covering to the head, or any protection to the face. The face of man, on the contrary, is covered by a beard which shields him from injury by exposure. He also spends less time in the relaxing atmosphere of heated rooms, and enjoys to a greater extent the bracing effects of out-of-door exercise.

Local causes may be—wounds; lodgment of a foreign body in the substance of a nerve-trunk; gun-shot wounds, or other injuries; tumors, especially Cancer; spicula of bone pressing on the nerve (an occasional cause of facial Neuralgia); carious teeth or stumps. Even Neuralgia from injury is aggravated by any impairment of the constitutional vigor.

Treatment.—In many cases this must be both local and general. The first includes the detection, and if possible the removal, of any source of local irritation of the nerve, either at its origin or in any part of its course. The second includes the medicinal and general measures afterwards pointed out. A clue to the treatment may be gathered from the causes, for, as these are various, it cannot be expected that any single drug, or any one plan of treatment, will be uniformly effective.

Leading Indications. — *Arsenicum.* — Burning or tearing intermittent pains having a tendency to periodicity; pain aggravated by the continuous application of cold: increased at night or during rest, but lessened during exercise; generally first occurs on the left side, it may be of the face, involving the same side of the head, the eye, and the ear. There are generally associated with this form of Neuralgia, excessive restlessness, anguish and irritability, a general exhausted or debilitated condition, small pulse, cold extremities, etc. Influenza, malaria, overwork, or, more generally, some constitutional cachexia, may have caused the disease. Pure Sciatica. Hemicrania in paroxysms; with coldness or soreness of the scalp; wrenching pains at root of nose, bottom of orbits, in the ear or teeth; viscid sweat; sometimes dizziness, nausea, retching, and even vomiting of bile; rheumatic or arthritic Hemicrania; intercostal pain from debility. Constipation does not preclude Ars.

The judicious employment of this potent mineral is often attended with the most marked success in neuralgic affections. The homœopathic law, indeed, leads us to expect that it would be so, for immoderate doses of Arsenic cause true Neuralgia. Persons who have attempted to poison themselves with it are said to have suffered excruciating pains along the course of the nerves.

Phosphorus. –In neuralgia from debilitated conditions of the nervous system, this remedy is equal or even superior to Arsenic, especially when due to mental overwork, or if associated with Megrim.

Aconitum.—Facial Neuralgia from cold, anxiety, or night-watching; the pains are severe, recur in paroxysms, are worse at night; and are accompanied by congestion in the head, lungs, or heart. Recent acute Sciatica.

Belladonna.—Burning, creeping, cutting, tearing, lancinating and stinging pains, or throbbing intermittent pains, with one or both cheeks flushed, and sometimes swollen; eyes red and watering, pain around the orbit, with twitching of the muscles, sometimes irritation and inflammation of the eyeballs; sensitiveness to sight and sound; illusions of sight and noises in the ears; congestive (not dyspeptic) headache; throbbing pain in the head, sense of undulation in the forehead, frontal headache, worse on stooping, also tearing, boring, lancinating, and jerking pains in the head. Tic-douloureux. Rheumatic Neuralgia. Ovarian Neuralgia, with crawling, griping pain, much thirst and vomiting. Epileptiform Neuralgia. Neuralgia of the fifth pair, and Hemicrania, are the varieties chiefly curable by Bell. In most cases the appearance of the patient strongly contrasts with that described under Ars., the Bell. habit being plethoric.

Spigelia.—Neuralgic headache and faceache, especially when the eye is affected; radiating in every direction; darting through from front to back; coming and going suddenly; running from eyes and nose; twitching of facial muscles; dyspnœa, palpitation of heart, and sleeplessness; worse in cold, damp weather, and from touch and motion.

China or Quinine.—Neuralgia from malaria, or from loss of blood or other animal fluids. Brow-Ague from these causes comes within the range of this remedy.

Rhus Tox.—Chronic Sciatica, especially if associated with Rheumatism, stiffness, and lameness; the pains are worse on first moving the affected part, and at night.

Gelseminum. Of little service in pure Neuralgia, but useful in allaying nervous irritation and muscular twitching. Hemicrania with disordered vision, dim or double; thirst for light; dizziness; semi-stupor; periodicity. Acute myalgia from long-continued exertion. Not adapted to Pleurodynia.

Coffea. Hemicrania coming on in the morning and lasting all day; increased sensitiveness, wakefulness, and nausea. Neuralgia of lower jaw. Megrim. Mental work excites pain. See also Section on "Toothache."

Mercurius.—Neuralgia of the face and head; pain proceeding from bottom of the orbit, with sense of coldness round the eye;

generally occasioned by carious teeth. See also Section on "Toothache."

Cimicifuga. — Ovarian or uterine Neuralgia. Neuralgia of limbs.

Pulsatilla. — Neuralgia of uterus, with bearing-down pain; spasmodic pains in lower part of the abdomen; toothache of pregnant women; toothache from cold, with pain over the whole side of head, and especially at the ear.

Hamamelis.—Testicular and ovarian Neuralgia; pains shifting suddenly to stomach causing nausea and faintness.

Veratrum. — Neuralgia of one side of face and head, with sensation of icy coldness in the part affected; Neuralgia of fifth pair; stabbing pain in the brows; dull aching pains, worse by movement, and atonic contraction of muscles. Enteralgia, as if knives were cutting the bowels, chiefly on the left side; intense agony at very frequent intervals. Uterine Neuralgia.

Sulphur. —Tic-douloureux. Intermittent pain, especially on right side; pain in maxillary region, with chilliness in the evening, followed by heat and perspiration in the night, weariness, and inclination to lie down; pain aggravated at night, gradually increasing and subsiding.

External Applications. — When the pain is excessively severe, and does not yield promptly to internal remedies, an Aconite lotion may be tried, and is often quickly successful. It is prepared by adding about a dozen drops of the strong tincture of Aconitum to four tablespoonsful of water, and may be applied hot or cold, as found most agreeable to the patient, by means of two or three folds of linen. Or Bell. may be used in the same way. Painting the course of the nerve from the root, or where the nerve emerges from the deep fascia, with the pure tincture of Acon. or Bell. is often even more prompt in its action. Under various names they are sold as homœopathic nostrums for Neuralgia. [The application of cotton batting wet with Spirits of Camphor, or the cotton alone, will often give great relief.]

Chloroform liniment is also recommended as a local remedy.

Accessory Means.—The Diet is an important part of the treatment, and should be as nutritive and abundant as the condition of the digestive organs will permit. It is especially

necessary that animal fats should enter largely into the diet, and any aversion to them on the part of the patient, or inability to digest them, should be overcome; well-directed efforts of this nature are nearly always successful. The particular form of fat is not important, and that variety may be adopted which can be best tolerated. Cod-liver oil, butter, cream, or even olive oil, should be used in quantities as large as the digestive organs can bear. "In some way or other, fat must undoubtedly be applied to the nutrition of the nervous system if it is to be maintained in its organic integrity, since fat is one of the most important, if not the most important, of its organic ingredients."

Protection from cold is another important element in the treatment. Exposure to a cold, damp atmosphere, with insufficient clothing, often acts as an exciting cause of Neuralgia, and should be avoided, as every recurrence of the disease tends to develop the constitutional cachexia, and to strengthen its hold on the system. Warm clothing, including flannel, is a great protection from atmospheric changes, and should be adopted by all neuralgic patients. Bathing, including salt-water baths, sponging followed by friction, or the manipulations of a clever shampooer; moderate and regular out-of-door exercise sufficient to favor nutrition without causing fatigue. A change of air, and sometimes entire change of habits, are necessary to insure a cure. Lastly, Rest is an important item in the cure of Neuralgia, especially in the case of hard-working and overtaxed patients.

Nervous Sick-Headache.

Definition.—An affection marked by Headache, dislike for, or indifference to, food, and frequently nausea and Vomiting; due to cerebral exhaustion or idiosyncrasy, rather than stomachic disorder.

The derangement referred to is not simply that described as a bilious attack, or the Headache following a too heavy dinner, or the taking of too much wine or spirits; for this may occur in any person from such indulgences; nor that resulting from the ingestion of some special article of diet which only disagrees with particular persons; but to Headache from nervous causes.

Symptoms.—They usually commence on rising in the morning,

the patient being pale, dark around the eyes, with contracted pupils, and looking and feeling extremely ill. Giddiness, swimming in the head, throbbing of the temples, and stupefying or agonizing, deeply-seated Headache, often limited to one spot on the side of the head, on the forehead, or over the eyes, and increased by movement, noise, strong light, and any kind of mental perturbation. The gastric symptoms—clammy mouth, anorexia, nausea and vomiting, or generally retching—are secondary rather than primary, having no necessary connection with any impropriety of diet.

Sick-Headache and Other Disorders.—It is most important to distinguish this affection from those acute diseases of which it is an inceptive or accompanying symptom, as Scarlatina, Typhus, Albuminuria, Inflammation of the brain, Apoplexy, etc.

Causes.—*Predisposing.*—A peculiar nervous temperament, which is often hereditary and runs in families. The real cause, therefore, lies deep in the patient's idiosyncrasy, and may be developed in numerous and widely different ways. The excessive use of tea or coffee is also in some cases a predisposing cause; also unhealthy occupations, sewage-gases, malaria, the employment of arsenic in wall-papers, or in articles of dress, reflex Neuralgia from dental or other causes, a sedentary monotonous life with the use of alcoholic beverages, and probably other varying causes. *Exciting.*—Whatever produces a powerful impression on the nervous system of a person thus predisposed may develop an attack, as fright, loud noises, exposure to a hot sun, a strong wind, or extremes of temperature. Moreover mental or bodily fatigue, worry, the pressure of business or family anxieties, deprivation of sleep or of food, prolonged nursing, and other causes of nervous exhaustion, are invariably succeeded by nervous, or, as it may be termed, asthenic headache. True Sick-headache, then, may occur in the most abstemious persons, and is not at all necessarily connected with a disordered digestive apparatus.

Epitome of Treatment.—1. *For the Acute Attacks.*—Nux V. (congestive Headache with giddiness, Constipation, etc,); Bell. (with flushed face, heat of eyes, which also feel too large); Bry. (with vomiting of bitter fluids); Glon. (throbbing Headache);

Cocc. (Sick-headache with much retching and but little except water or mucus vomited); Ver.-Alb. (Sick-headache with prostration, cold sweats, etc.); Coff. (nervous Headache with sleeplessness); Cimic. (nervous, hysterical Headache of women, especially at the monthly period, or consequent on its derangement or cessation); Acon. (Headache from Catarrh, with general deranged circulation); Iris (copious vomiting, the ejected matter containing bile); See also the Section on "Vertigo and Headache."

2. *Chronic Cases and between the Attacks.*—Sulph., Sep., Calc.-C., Ars., Nux V., Sulph.-Quin.; Zinc. (with general nervous depression).

Accessory Means.—The patient should lie down in a quiet room with a subdued light, and be kept from every kind of disturbance, so that, if possible, sleep may afford relief. Rest and sleep are the most natural restorers. Hot tea or coffee, which act on the nervous system, often give considerable immediate relief, although the excessive use of these beverages predisposes to subsequent attacks. If pressure relieve, the wet bandage should be tightly bound round the head.

During an attack, unless it is prolonged, entire abstinence from food is necessary; at least only the slightest nourishment—milk-and-lime-water, plain soup, etc.—should be given; copious draughts of hot water taken early often mitigate or shorten the attack.

Preventive Treatment.—The causes which predispose to or excite the paroxysm must be avoided, and the tone of the general health improved. For this the knowledge and tact of the physician are necessary, for every case must be treated according to its individual peculiarities. Tea and coffee, although they sometimes give relief during a paroxysm, render the nervous system increasingly susceptible to the attacks, and we have known several patients enjoy complete immunity from the attacks by abandoning these beverages. The general regulation of the diet, the adoption of out-of-door recreation, and the general hygienic measures pointed out in the first chapter of this work, will prevent or minimize the affection. In some, when attacks frequently recur, change of occupation, scene, and climate are necessary to break

up the tendency. The climate selected should be dry and bracing, and walking or horse-back exercise taken daily.

CHAPTER IV.

DISEASES OF THE EYE.

Simple Ophthalmia.

Ophthalmia is a general term for Inflammation of the conjunctiva—the mucous membrane which lines the eyelids and the front part of the eyeball. Formerly, when the eye and its diseases were less understood than they are at present, nearly all inflammatory affections of the organ were included under this term. There are several varieties of Ophthalmia, the most frequent being those described in this and the following Sections. First, Simple Ophthalmia.

Simple Ophthalmia differs in degree, rather than in form, from the variety next described. There is generally some itching, and a sensation of heat, or a feeling as of sand under the lids. We have introduced this form of conjunctivitis to suggest the necessity of an ocular inspection of the eye whenever a simple Ophthalmia does not quickly yield to treatment, for the sensation of a foreign body in the eye in such cases sometimes turns out to be correct.

Causes.—Exposure of the eyes to dust, smoke, impure air, cold winds, glare of light, exertion in using the eyes on too near objects, or some other local cause.

Treatment.—Arn., Acon., Bell. See Section on "Leading Indications for Ophthalmic Medicines," p. 193.

Catarrhal Ophthalmia.

Symptoms.—A pricking pain, especially on moving the eye, as if there were sand or a little fly under the lid; sensitiveness of the membrane to cold air; watering of the eyes, and a secretion of mucus, gluing the lids together in the morning; bright

redness of the conjunctiva. The redness in this form of Ophthalmia consists of bright-red, tortuous, interlacing lines. This is to be distinguished from Inflammation of the sclerotic coat of the eye, in which disease the lines are violet-colored, straight, and radiating from the iris. The discharge is sometimes abundant, but less so than in the purulent form; it is also slightly contagious, more or less so according to the admixture of pus globules in the discharge. The most marked symptoms are—redness, an increased discharge, and pricking pain; the last is no doubt due to the irregular distention of the vessels, which disturbs the part mechanically, just as dust or a fly might.

Causes.—Vicissitudes of temperature, easterly and north-easterly winds, cold and damp, especially draughts of cold air.

Treatment.—Acon., Bell., Euphr., Merc. See "Leading Indications for Ophthalmic Medicines," p. 193.

Accessory Means.—Exposure to currents of cold and damp air should be avoided, and if the weather is inclement during an attack, the patient should remain in a room of uniform temperature. A piece of lint, wetted in tepid or cold water, as may be most agreeable to the patient, should be laid over the eye, and covered with oil-silk, on retiring to bed. If the lids are agglutinated in the morning, they should on no account be opened without first being moistened with tepid water or saliva; but any gumming together may be prevented by smearing the lids at night with a little cold-cream or olive-oil, or by covering them with moist lint and oil-silk, as just recommended. As long as the eyes remain sensitive they may be protected by plain blue or smoke-colored glasses; they should be used with extreme moderation; crowded rooms, or air poisoned by tobacco-smoke or other impurities, should be avoided. The food should be simple, nourishing, and digestible.

[The following lotion may be beneficial in case the disease is obstinate or protracted. Borax, five grains; Distilled water, one ounce. Two or three drops are to be dropped into the eye three times a day; this will cause no pain or discomfort whatever, but on the contrary will prove very grateful and cooling to the inflamed mucous surfaces.

If there is a considerable mucus or muco-purulent discharge

present the lotion should be made from alum or sulphate of zinc, from two to three grains of either to the ounce of water, and used the same as the previously mentioned one.

Catarrhal Ophthalmia may become chronic, especially in patients whose health is below the average standard, and who are obliged to use their eyes for long continued and fine work. In these cases a spray of cold water over the closed lids will be found very refreshing; to the water may be added borax or common table salt in the proportion of ten grains of either substance to the pint of water.

In addition to the remedies mentioned above, Alumina, Arsenicum, Puls., and Sulph. are recommended.]

Preventive Means. — Persons predisposed to Ophthalmia should guard against all needless exposure during the prevalence of easterly and north-easterly winds. In reading, writing, or when using the eyes on fine work, the morning hours should be chosen, when the light is growing brighter. The habits should, therefore, be early and regular; the beneficial influence of out-of-door air should be regularly taken advantage of.

Purulent Ophthalmia.

Definition.—Inflammation of the conjunctiva accompanied by chemosis and by considerable secretion of mucus and pus, which mingle with the tears.

Symptoms. — These are more violent and destructive than those of either catarrhal or strumous Ophthalmia. The tingling sensations first experienced are soon followed by acute pains, which extend through the eyes to the temples and brain itself; the flow of tears is changed into a profuse secretion of pus, the lids are swollen, and there is almost total loss of vision. There are also constitutional symptoms, such as Headache, nausea, quick pulse, hot skin, etc.

Causes.—Sudden extreme alternations from heat to cold; the irritation of sand in the eyes, *metastasis* of Measles, Scarlatina, Small-pox, etc.; also endemic and epidemic influences, as crowding together of persons in ill-drained, dirty, badly-ventilated, and insufficiently-lighted dwellings.

Egyptian or contagious Ophthalmia arises when people are

crowded together in filthy habitations, and was first brought into England from Egypt by British troops, early in the present century; hence its name. It spread so destructively, that after the Napoleonic wars England alone had more than five thousand blind invalided soldiers to provide for. There are, however, many local influences which render the disease endemic in places besides Egypt. Over-crowding, defective ventilation, and want of cleanliness, are potent causes. It is very common among the Irish poor.

Treatment.—Zinc., Arg.-Nit., Hep.-S., Merc., Ac.-Nit., Phos., Sulph., and during the inflammatory stage, Acon. The first two may be used locally as well as internally.

Accessory Measures. — Iced-water compresses, and Acon., render the use of leeches wholly unnecessary. If but one eye is affected, the other should be bandaged as a precautionary measure. The strictest cleanliness is also necessary.

[This is one of the most formidable diseases of the eye that the physician is ever called upon to treat. It is highly essential that a skilled nurse should be employed, for the eye needs almost constant attention night and day. The discharge is to be gently wiped away as fast as it accumulates, and this may be every five, ten, or fifteen minutes; small bits of soft wet linen are best adapted for this purpose, and they should be burned immediately after using. A solution of nitrate of silver of the strength of one grain to one ounce of water should be used as often as once in four hours if the disease is severe and the discharge copious; two or three drops are to be dropped into the eye just after cleansing.

It also may be necessary to use lotions of alum, sulphate of zinc or sulphate of copper.

Cold applications are very grateful to the patient, and should be applied during the intervals of using the lotions.

Great care is to be taken if only one eye is affected that the other does not become so; a carefully applied bandage affords the best protection. The same care is to be preserved by the attendants and all who come in contact with the patient, the discharge being most virulent and capable of producing the most violent form of the disease in the eye of any one that it should unfortunately come in contact with.]

Prevention of the Spread of Purulent Ophthalmia.—As the matter from an affected eye applied to a healthy one will produce a similar disease—by the use in common of towels, basins, etc., and even by infinitesimal particles in the air—the healthy should be separated from the diseased, and each person use his own towel, sponge, etc

Purulent Ophthalmia of Infants.

Symptoms. — The eyelids become red and swollen at their edges, and are gummed together during sleep; a discharge is set up, which being removed, the conjunctiva is seen to be swollen, and so vascular as to resemble crimson velvet; the cornea looks smaller than natural, and as if sunk in the bottom of a pit. The infant is restless and feverish. The symptoms usually set in on the second or third day after birth, although occasionally not for two or three weeks.

Causes.—The most common is contact in the vaginal passage, during birth, with leucorrhœal or gonorrhœal discharge. Possibly there may be irritation of the eyes from neglect of cleanliness; the use of strong soap, or exposure of the eyes to a too bright light or a strong fire.

Treatment.—(1) *Mild cases.*—Acon., and later, Puls., Merc. or Hepar, with cold compresses, and a frequent careful removal of the secretion with a soft sponge and tepid water. (2) *Severe cases.*—"A collyrium of Arg.-Nit., one grain to the ounce of water, is indicated when the discharge is copious and wholly purulent. This should be dropped into the eye, after it has been carefully cleansed from the discharge, twice a day. In a few days, if the profuse discharge still continues, and especially if the slightest haze upon the surface of the cornea indicates a complication in this direction, a solution of three to five grains of Arg.-Nit. to the ounce should be painted with a brush upon the everted lids, and immediately washed off with tepid water, or neutralized by the application of a solution of common salt and water. No evil consequences whatever can result from this proceeding, and not unfrequently the beneficial results of it are seen after a single application. It need not be often repeated. I have unbounded faith in the homœopathicity, so to speak, of a

solution of Arg.-Nit. for that diseased state of the conjunctiva in which it secretes a profuse purulent matter. It should be employed judiciously, and the word judiciously means a great deal in this connection; for, probably, of all the remedies ever devised for the eyes, Arg.-Nit has, by its injudicious employment during the last thirty years, done the greatest injury. Cold compresses should be employed to lessen the irritation immediately afterwards, and I prefer as internal remedies after Acon. in the commencement, Merc. when the discharge is profuse, and the alternation of Ars. with this remedy if the cornea is ulcerated. It is advisable in this, as well as all other forms of conjunctivitis, when there is Ulceration of the cornea, to bandage the eye closely so as to prevent all friction between the lids and the ulcerated corneal surface." (*Dr. Angell.*)

As a local application, alum-water lotion (6 grs. to 1 oz. dist. water) is as efficacious as the Arg.-Nit.; indeed, in most cases no external application is required at all besides the use of tepid water to cleanse the affected surfaces; but if proper treatment be not commenced early, the eyes are often in danger of being materially injured or destroyed, this disease being the most frequent cause of blindness among the poor.

Prevention.—Cleanliness of the mother before birth, and of the child after birth. The disease is contagious, and care should be taken to prevent the matter from the infant's eyes accidentally coming in contact with the eyes of other children, or even of grown-up persons. It also spreads by infection, and may be propagated through the air of a badly-ventilated apartment from one infant to another. At the same time, a suitable temperature should be combined with good ventilation, and pure air not confounded with cold air, or a draught.

Gonorrhœal Ophthalmia.

This arises from the accidental contact of gonorrhœal matter with the eye, and not, as some have supposed, from a metastasis of the disease from the organs of generation to the eyes. In this way the matter may be accidentally applied to the eye of a healthy person through the medium of clothes, towels, etc. Even children are sometimes thus contaminated. The disease

presents similar symptoms to Purulent Ophthalmia, and to that affecting infants.

In this form, as also in the purulent or contagious variety, there is great danger that the conjunctiva should swell extremely and overlap the margin of the cornea, and lead to its sloughing, apparently by strangulation of the vessels by which it is nourished. When this condition occurs, it is called Chemosis. Gonorrhœal Ophthalmia is a most dangerous affection of the eye, and often rapidly fatal to vision.

Treatment.—Arg.-Nit., Merc., Bell., Sulph.

Accessory Means.—Assiduous bathing, fomentations, iced-water compresses, etc., astringent collyria, and sometimes surgical measures. Prevention, see the preceding Section.

[The same local treatment and precautions should be carried out in gonorrhœal ophthalmia as were mentioned previously for the relief of purulent ophthalmia, the diseases being essentially the same, only the one being caused by a specific poison.]

Leading Indications for Some Ophthalmic Medicines.

Belladonna.—Pain, redness and swelling; throbbing pains in the temples; flushed cheeks, glistening eyes, and great intolerance of light. A dozen drops of the tincture may be mixed with half a dozen table-spoonfuls of water, and a spoonful given during the acute stage every hour, and afterwards every three to six hours. Acon. is often required in alternation with Bell. when there are general feverish symptoms; or two doses of Acon. may precede Bell.

Aconitum.—Ophthalmia, with quick pulse, dry skin, thirst, and when arising from cold. The early administration of this remedy, with the local use of cold compresses, will generally promptly relieve and cure Catarrhal Ophthalmia.

Mercurius Sol.—Ophthalmia marked at first by a copious discharge of watery fluid, which afterwards changes to mucus and pus; agglutination of the lids; smarting heat and pressure, with aggravation of the pains when moving or touching the eyes. There is not much fever present, but considerable itching and irritation.

Euphrasia.—Catarrhal Ophthalmia, with profuse secretion of

tears, sensitiveness to light, and catarrhal Inflammation of the frontal sinuses and of the lining of the nose. In simple catarrhal Inflammation, profuse lachrymation being the chief symptom, it often cures without the aid of any other remedy.

Mercurius Cor.—In the most violent forms of Acute Ophthalmia with extreme dread of light, or in chemosis, the 1x or 2x of this remedy will often cut short the attack.

Argentum Nit.—This remedy is especially valuable in the Purulent Ophthalmia of children, which it cures rapidly and completely, without the local use of the nitrate. It is also valuable in Chronic Ophthalmia.

Phytolacca.—Itching in the eyes, aggravated by gaslight; chronic conjunctivitis with rheumatic pains; reddish-blue swelling of the lids.

Gelsemium.—Squinting; desire for light; orbital Neuralgia.

Pulsatilla.—Eyelids agglutinated; increased secretion of tears; neuralgic pains in the eyeballs.

Arsenicum.—Obstinate Ophthalmia in weak, nervous patients, particularly if the secretion be acrid, with burning, tearing, or stinging pains in the globe and lids, aggravated by light.

Phosphorus.—Chronic and obstinate cases which have resisted the usual remedies, with sensitiveness to light, heat, and itching of the eyes, sudden attacks of blindness, black spots floating before the eyes, and secretion of viscid mucus.

Ac.-Nit.—Purulent Ophthalmia; swelling and redness of the mucous membrane and lids; secretion of viscid mucus or pus; burning and smarting in the eyes; Photophobia; nightly agglutination; and pains in the bones and parts around the eyes. Ac.-Nit. is required in cases originating in Syphilis, or aggravated by mercurial preparations.

Hepar Sulph.—Similar cases to Ac.-Nit., which it may follow, if necessary.

Arnica.—Inflammations affecting either the mucous membrane, or the deeper structures of the eyes, from mechanical injuries. In addition to its administration, the eye should be bathed with a lotion of Arnica (twelve drops to four table-spoonfuls of water). After well bathing the eyes, a piece of lint or linen should be saturated with the lotion, applied to the eye, covered with oil-silk, and secured by a handkerchief.

Accessory Measures.—In the treatment of the various forms of Ophthalmia, and weak and imperfect vision generally, the causes of the disease should be correctly ascertained, so that they may, as far as possible, be removed and guarded against. Patients in crowded and unhealthy towns should remove to the country, at least for a time, where they may take daily out-of-door exercise, and enjoy a pure, bracing air. Frequent careful tepid washing of the eyes to prevent accumulations of matter; a spacious, well-ventilated apartment; and avoidance of all causes likely to keep up the inflammatory processes, are all necessary precautions. The food should be plain and nourishing, coffee and fermented drinks being excluded; the habits early and regular, and frequent bathing should be practiced. A small wet compress, covered with oil-silk, worn over the nape of the neck, is a valuable counter-irritant when the more violent inflammatory symptoms have been subdued; it is also useful in obstinate cases.

Iritis.

Definition.—Inflammation of the iris. [The iris is a movable curtain, having a circular aperture nearly in its centre, and occupies the space between the cornea and crystalline lens. Its use is to regulate the amount of light admitted into the eyes; for this purpose its inner circumference is capable of dilating and contracting, in obedience to certain influences, whilst its outer circumference is immovable.]

Varieties.—Traumatic Iritis is due to some injury, as a stab, cut, or blow. It has been called Common Iritis, because it is a case of common Inflammation, without any specific or constitutional taint. Rheumatic Iritis arises from cold, or is the consequence of Rheumatism, and is the most frequent form of the disease; it is very painful, because the sclerotic, which is an unyielding membrane, is so much implicated. Unless skilfully treated, it has a great tendency to recur at intervals, so that a person may have an attack once or twice a year during the remainder of his life. Arthritic Iritis is associated with the gouty diathesis. Syphilitic Iritis generally occurs about the middle period of secondary Syphilis, after the patient has suffered from sore throat, etc., but before the periosteum and bones become

affected. It chiefly differs from the traumatic variety in the comparative absence of pain, except during the night, and in its being a more sub-acute or chronic disease. Scrofulous Iritis is connected with Scrofula.

Symptoms.—The iris changes its color and becomes dull; the pupil becomes contracted and irregular in shape, and, if the disease be neglected or mistreated, closed or obstructed, and the rays of light being intercepted on their way to the retina, sight is prevented; a radiating zone of vascular redness surrounds the cornea; matter forms; there are burning pains of a neuralgic character in the eye, and severe aching in the supra-orbital region, which come on in paroxysms, and are aggravated at night.

Epitome of Treatment. -1. *Traumatic Iritis.*—Arn. (both internally and externally), Acon. (febrile symptoms), Bell.

2. *Rheumatic.*—Acon., Merc., Bell.

3. *Arthritic.*—Cocc., Coloc., Spig., Sulph.

4. *Syphilitic.* — Merc-S., Cinnabar, Clem., Merc.-Iod., Bell., Aur.

5. *Scrofulous.*—See "Scrofulous Ophthalmia."

6. *Gonorrhœal.*—Arg.-Nit. (internally and externally).

[In nearly every variety of Iritis the tendency is to the formation of adhesions between the posterior surface of the iris, and the anterior capsule of the lens. When these adhesions are recent and not too extensive they may be torn apart by the local use of some mydriatic and atropia sulph. in the strength of two to four grains in one ounce of water is the substance generally used for this purpose; two drops of this solution are to be put in the eye three or four times a day.

If this method of treatment of Iritis is neglected the adhesions are almost sure to become permanent, and thus prove a constant source of irritation to the eye; also serve as a basis of future attacks of this disease.]

Accessory Means.—Cold compresses should be avoided; warm applications, especially dry warm wadding, are beneficial. (See Buffum On the Eye).

Amblyopia—Impairment of Vision.

Definition.—Indistinct vision from any cause other than

anomalies of refractive power, as when no glasses improve the vision.

Diagnosis.—A simple and reliable method of distinguishing Amblyopia, and other affections involving loss of vision, from anomalies of refraction which only require proper glasses for their cure, is by requesting the patient to look through a large pinhole in a black card. If vision is not improved, the defect must be referred to some of the inner structures of the eye, and an opthalmoscopic examination must be made to detect its nature. If vision is improved, the refractive power is at fault, and will be corrected by suitable glasses.

Causes.—Excessive use of the eyes on too bright or too minute objects; too much sleep; the use of tobacco or stimulants; suppressed exhalations from the skin from exposure to cold and wet; suppressed period; etc. These and similar causes may lead to temporary Congestion of the brain, and over-stimulate and exhaust the retina, causing dimness or entire suspension of vision, without permanently damaging the nervous structure of the eye. On the other hand, an anæmic condition of the system may diminish the supply of healthy blood to the brain and retina, and produce Amblyopia by exhaustion. Excessive drains on the system, as from flooding in childbed or at the monthly period, prolonged nursing, sexual excesses, or severe illness. A similar condition may be induced by chronic Dyspepsia from functional or organic disease of the stomach or liver. These affections may cause impairment of vision, through the medium of the sympathetic system, by diminishing the nervous and vascular supplies required for the healthy functions of the eye. Dental causes may be in operation, rendering the extraction of a tooth necessary.

Treatment—Leading Indications.— *Belladonna.*—Excessive Photophobia; redness of the eyes and face; threatened Amaurosis, with Headache, bright flashes before the eyes, and a sense of weight and pressure in those organs. It is particularly suited to stout, plethoric persons; also if the disease has been caused by Inflammation or Congestion of the optic nerve, retina, or some part of the brain.

China. Indistinct vision, sudden obscuration of sight, great general debility, and when the disease is due to profuse dis-

charges of blood or pus, or prolonged nursing. China may require the aid of Bell., or some other remedy.

Phosphorus. The pupils and eyes are of a natural appearance, and distant objects are seen as if enveloped in mist; black spots before the eyes, and diminished vision. It is especially indicated when imperfect vision occurs in aged or enfeebled persons; or when self-abuse, etc., have led to it.

Ac.-Phos.—Also useful in the condition last mentioned.

Nux Vomica.—Intermittent obscurity of vision; stupefying Headache; or temporary loss of sight which occasionally accompanies intermittent diseases. This remedy is further indicated in Amblyopia traceable to too close confinment within doors, excessive mental labor, Indigestion, or indulgence in stimulants.

Merc.-Cor.—Contraction of the pupil, mistiness of sight, dread of light, *muscæ volitantes*, sensitiveness of the eyes to the glare of the fire, etc. This remedy is especially indicated when imperfect vision arises from organic changes in the tissues of the eye, also when there is a scrofulous or syphilitic taint.

Gelsemium.—A prominent indication for the use of this remedy is—desire for light, thus contrasting with Bell., diplopia, confusion of sight, pain in the orbits. Affections of the sight from over-exertion of the eyes is much relieved by Gels., as are also those arising from over-doses of Quinine.

Euphrasia. Excessive discharge of tears; also when the complaint is traceable to Catarrh.

Arnica.—Aching of the eyeballs when reading; Amblyopia from external injuries; and from gastric irritation, with contraction of the pupil.

[Electricity, preferably the galvanic current, is highly recommended for some forms of amblyopia. It is not infrequent to find the sight in the two eyes unequal and a high degree of amblyopia existing in one; this is often associated with refractive anomalies, particularly *hyperme-tropia*, which may exist in a different degree in either eye.

The sight in the amblyopic eye may often in a measure be restored by systematic using or practice with a convex glass. A convex glass sufficiently strong to read coarse print is to be selected, and the eye compelled to read for about five minutes

three times a day. After this practice has been carried on for some considerable time it may be found that a weaker glass will enable the wearer to see the same or even finer print, thereby showing an improvement in the sight.]

Suggestions on the Preservation of the Sight.—In addition to the measures already pointed out, the following remarks on conditions favorable and unfavorable for the exercise of the eyes may be found useful.

1. *Conditions of Light Favorable to the Eyes.*—Daylight, owing to its mildness, uniformity, and steadiness, furnishes the kind and degree of illumination best suited to the function of vision. With the most perfect scientific improvements, artificial light is but an imperfect substitute for the clear light of day, being often too powerful or too feeble, or flickering or wavering; at the same time the air is often injuriously heated, and deteriorated by the combustion of its oxygen. To enjoy daylight to its fullest extent involves an observance of the excellent and healthy habit of early rising; which, therefore, on this account, as well as on other considerations, we heartily recommend. Morning light is also specially adapted to persons having a tendency to weakness of vision, as the light is then increasing.

If it be necessary that work should be done by artificial light, that kind should be selected which requires least exertion, as writing rather than reading for the student, and sewing lighter and coarser work instead of fine and dark-colored for the seamstress.

2. *Unfavorable Conditions for Exerting the Eyes.*—The eyes should not be exercised directly after a full meal; when the body is fatigued; late at night, when sleepy; when in a recumbent or stooping posture; when dressed in tight clothing—tight cravats, stays, or even tight garters or boots; in badly-ventilated rooms lighted by gas during recovery from severe or exhausting disease.

Light must not be too strong, or it is apt to dazzle the eyes, cause a rush of blood to the head, and excite a discharge of tears; on the other hand, a weak light is equally injurious; and if the eyes are used when the light is declining, so that it becomes necessary to hold the book or work nearer in order to see, the sight must inevitably suffer. An unsteady light, as from imper-

fect gas; or using the eyes when the waves of light are moving about, as under a tree, or when riding, is highly detrimental, as the eyes are severely exercised in continually readjusting themselves. These are some of the conditions in which, if reading or other close exercise of the eyes be persisted in, the sight will suffer, and Amblyopia or Amaurosis possibly ensue. The danger to the sight is very great during convalescence from prolonged exhausting disease, when patients are apt to read a great deal; to the weakness of vision is then often added that of a bad posture, such as the recumbent, or even artificial light, rendering such a use of the eyes extremely prejudicial. Convalescents should be read to, and the matter should be interesting and amusing.

It should be remembered that the reading of a novel is more hurtful to the sight than that of a scientific book, because it is read faster, and the eyes are more severely exercised. A broad page is also obviously more fatiguing to the eyes than a narrow one. On the eyes becoming dim after too long exertion they should rest, and on no account should an attempt be made to persist in reading by increasing the light.

Eye-shade.—An eye shade or eye-protector, of brown or slate-colored paper, covered with green or gray silk, and secured by a tape or piece of elastic, answers the purpose well for protecting the eyes from gas, etc., indoors. For protection from the rays of the sun out of doors, a wide-brimmed hat answers admirably. An eye-shade should be worn when there is unnatural sensibility to light.

Spectacles.—Spectacles of plain blue glass are useful for morbid sensibility of the eyes to light, and may be darker or lighter in shade, according to the amount of protection required; or brown or smoke-colored glasses may be used if preferred. The latter cut off the rays of light, and consequently render vision somewhat less distinct; while blue glasses, excluding the orange rays only, interfere less with the clear definition of objects. Green glasses protect the eyes from the red rays; but it is the orange rays which are most intolerable to a sensitive retina. Strong plate-glass spectacles should be worn by persons finding it necessary to protect the eyes against chips and particles of stone or steel (*Angell*).

In all measures adopted for the general protection of the eye good ventilation and a healthy temperature must not be forgotten.

Eye-Douche.—Much benefit often results from a cold douche bath, a stream of water being directed on the closed eye and adjacent parts. Surgical instrument makers sell instruments especially adapted for this purpose. In the absence of one of these, water may be thrown by the hand against the closed eyes when holding the face over a basin of water. (See Buffum On the Eye.)

Amaurosis.

Definition.—Impaired or lost vision from primary disease or changes in the brain, the spinal cord, or the optic nerve.

The word *Amaurosis*, from the Greek, means obscure or dark, and may be of various degrees, from the slightest defect of vision to complete blindness. In this section we restrict the term to degenerative changes in the optic nerve. This form of Amaurosis is sometimes incurable, and the patient is liable to die of disease of the brain.

"The transparent parts of the eye, the several media, so skilfully and exquisitely adjusted for the due refraction and collection of the rays of light into an image of the object from which they flow, may all be perfect and in order; but the beautiful apparatus is useless, for the patient cannot see with it. The fault is in the nervous matter that should receive and transmit the impression, and render it an object of perception to the mind." (*Watson.*)

Causes.—The cause is sometimes obscure. Disease of the retina, optic nerve, or brain, or of some neighboring structure interfering with the nervous supplies of the eye; Meningitis of the base of the brain is a frequent cause in its chronic form; so also is Periostitis at the base of the brain. Fractured bone, or Tumors of the brain, may cause progressive atrophy of the optic nerve through pressure, or otherwise interfere with its nourishment. An embolus lodged in the retinal artery, detachment of the retina, or extravasations of blood on that membrane, will also cause Amaurosis. When the imperfect vision occurs suddenly, it is probably due to embolus. The absorption of lead into the

system has been known to produce atrophy of the optic nerve. The excessive use of alcohol, tobacco smoking, and other degenerative habits may also be causes. In elderly persons Amaurosis is a symptom of senile decay, and generally comes on gradually.

Symptoms. — These are very various and inconstant. Approaching Amaurosis is indicated by pain in the forehead and temples, diminishing as the disease advances, and ceasing when it becomes complete. The patient sees best in a bright light, and objects usually appear perverted, being only partially seen, or of an unnatural color, or double; or dark bands cross the field of vision, or floating dark spots (*muscæ volitantes*), or flashes of light. If there be complete loss of vision, the pupil is dilated, fixed, insensible to light, but beautifully black and clear; hence the disease has been called *Gutta serena*. The most marked symptoms are the dilated and sluggish pupil, and, generally, when the eye is quite blind, its complete immobility.

Amaurosis is not peculiar to any age, and may come on either rapidly or gradually.

Epitome of Treatment.—(1) *Nerve Irritation or Atrophy.*—Merc.-Cor. (organic change, Struma, Syphilis); Phos. (debility or old age); Ac.-Phos. (self-abuse); Sant. (hyperœsthesia); Bell. (congestion).

(2) *Atony.*—China (loss of blood or other fluid); Nux V. (excessive mental labor); Gels. (thirst for light, Diplopia, post-diphtheritic); Bell, (shrinking from light); Ruta, Arn. (over-straining of the eyes); Euphr. (Lachrymation); Lithium (Hemiopia); Ars., Quin., Zinc., Phos., K.-Hyd., Aur.

(3) *Other Remedies.*—Spig., Croc., Macrot., Strych.

The Accessory and Preventive measures are the same as those pointed out in the last Section.

Muscæ Volitantes—Spots before the Eyes.

Definition.—An appearance before the vision as of black motes; or of thin gray films, like the wings of a fly; or half-transparent gray threads, like spiders' webs; or if viewed against a white wall, or other clear and near object, they appear as one or a number of small circles with a central aperture.

Causes.—The exciting causes of these ocular spectres are

chiefly the following: excessive use of the eyes, especially in artificial light, or in badly-ventilated rooms; insufficient sleep; certain fevers, as Typhus and Enteric; deranged digestion; Hypochondriasis; morbid sensibility of the general system from business or family cares, or mental distress. A hypochondriacal person having once detected muscæ, takes such frequent notice of them that they become a subject of great anxiety.

Muscæ Volitantes may, however, arise from organic causes, and are frequent precursors of Amaurosis or of Cataract. They are more serious as indicating organic changes in the organs of vision, when associated with real impairment of vision, and when the motes are not floating, but fixed. The latter are generally associated with Amaurosis (see the preceding Section).

Treatment.—Hyos., Bell., Cocc., Coni., Merc.-Cor., Zinc.

Accessory Means.—As floating muscæ are due to morbid sensibility of the retina, the treatment must be mainly directed to detecting and removing the exciting cause. If the eyes have been overstrained, rest is essential; entire or partial relief from ordinary daily duties; daily moderate out-of-door exercise in country or sea air; a regulated, nourishing diet; and bathing of the eyes, closed, with cold water, for two or three minutes, several times daily. If muscæ are very troublesome, blue glasses should be worn to render them less apparent.

Cataract.

Definition.—Opacity of the crystalline lens, or its capsule, or both, causing obscuration or total loss of vision.

Varieties.—The chief are the hard and the soft. The hard Cataract is of a gray or yellowish-gray color, and is almost peculiar to the aged; soft Cataract is of a lighter or more bluish tint, and has a wider circle. There are also congenital Cataract, dating from birth; traumatic, from injury; and fluid: the last is rare, has a milky-white appearance, and may be recognized by being seen to move with different positions of the head. The hard is the most frequent, for it is one of the changes incident to old age.

Symptoms.—The opacity comes on in a gradual manner, first affecting one eye, but afterwards both, and is often discovered by

accident only. The lens becomes of an amber or grayish color and somewhat less, and the central part first becomes opaque. Objects appear to the patient as if seen through a mist or gauze, and a flame is observed surrounded by a halo. Vision is less affected in a weak light, such as twilight, or when the patient has his back to the window; for, under such circumstances, the pupil dilates widely, and the light enters at the circumference of the lens, which is less opaque than the centre. For the same reason, Atropine improves vision. The patient also sees better in an oblique than in a straight direction, because the lens, being shrunk, does not completely cover the vitreous humor. From the gradual way in which the disease comes on, the patient has a natural, easy manner, and very different from the fixed, vacant stare which marks complete Amaurosis. Indeed, the patient never becomes so blind but that he can distinguish day from night, the position of the window, the shadow of passing objects, and is able to find his way about his own house with little difficulty. Pain, dread of light, spectra, etc., indicate unfavorable complications.

Causes.—The most common one is defective nutrition of the lens, as from old age; disease of the kidney; or it is attributable to changes in the deeper structures of the eye. The soft infantile Cataract, if not congenital, seems to be associated with infantile convulsions. Hereditary predisposition exercises an important influence, Cataract not infrequently being found to occur in several children of the same family, evidently pointing to some peculiarity in the constitution of the parents. The children whose parents are first cousins not infrequently suffer from Cataract and other congenital defects. Traumatic Cataract arises from an injury or from mechanical or chemical irritants; exercise of the eyes in the hot sun, or before too hot and bright fires; long-continued use of the eyes on too minute objects, etc.

Medical Treatment.—It does not seem improbable that in the course of time we may find some reliable remedy, the administration of which, before the lens-fibre has become degenerated, may restore its transparency. Cataract is known to be a result of ergotism. It has also been produced in frogs by administering sugar in large quantities, or by injecting it under the skin.

Chloride of sodium and alcohol have produced similar results (*Angell*).

Epitome of Treatment.—Cures, or, at least, beneficial effects, have often resulted from the following remedies:—Bell. (after Inflammation of the eyes); Cann. (specks on the cornea); Calc. (in strumous persons); Sulph. (after cutaneous eruptions); Sil., Coni., Euphr., Phos., etc.

Operations.—Sometimes Cataracts are amenable to medical treatment, but some varieties require such surgical measures as extraction. Any operation, however, should be deferred so long as the patient has useful vision with one eye, lest an operation should produce Inflammation, which might extend to the other, and thus both eyes be lost. (See Buffum On the Eye.)

Strabismus—Squinting.

Definition.—A condition in which the axis of one eye is not parallel with that of the other; there is loss of harmonious movement of the eyes, and if the unaffected eye be closed, the squinting one looks straight.

Varieties.—If the squint is directed towards the mesial line, it is called convergent; if outwards, divergent; if confined to one eye, monocular; if the squint alternates between the two eyes, binocular. There is also a practical division into the periodic and the confirmed, although the pathology of the two is identical, and the former is but the precursor of the latter. The inward or convergent is the most common.

Causes.—These are occasionally obscure. Sometimes the disorder arises from an unequal use of the eyes, as from imitating those who squint, looking at spots on the nose or face, or forming the habit of turning the eye inward; sometimes as a consequence of Scarlatina or Measles; from irritation, as of worms, teething, indigestible food; from passion; from disease of the brain; and from general ill-health. When it occurs in the course of any disease of the brain it must be regarded as an unfavorable symptom. Sometimes it is congenital. In aged persons the condition is due to partial Paralysis of the *rectus internus*—the inner muscle of the eye.

Epitome of Treatment.—1. *Squinting from Cerebral*

Irritation.—Bell., Stram., Hyos., Sulph., Gels. These remedies are adapted to cases following the eruptive fevers, during Dentition, etc.

2. *From the Irritation of Worms.*—Cina., Spig., Sulph.

3. *From Causes not Traceable.*—Phos., Spig.

Corrective Treatment.—The careless or irregular use of the eye should be guarded against. An attempt may also be made to correct the deformity by closing the unaffected eye for a short time every day, when the other will look straight. This, however, must be done intelligently, or while curing the one, the affection may be set up in the other. In recent cases, from Dentition, Worms, Whooping Cough, gastric or other disturbances, the removal of the primary disease is often sufficient to restore the normal position of the eyes. Congenital Strabismus can only be cured by surgical operations.

[If the vision is tested in eyes affected with strabismus it will almost always be found that in the squinting one, or if both are turned, in the one with the greatest deviation, there will be considerable impairment of the sight. In children this may be somewhat remedied by bandaging the straight eye several hours each day, thereby compelling the child to use the other one. A large proportion of the cases of convergent strabismus are due to the presence of hyperme-tropia; the squint generally commences to show during the early years, at the first efforts of accommodation. A properly adjusted pair of convex glasses, constantly worn, may at this stage prevent the deformity. As soon as the squint becomes fixed, or permanent, a careful division of the tendon of the contracting muscle should be performed.]

Myopia—Near-sightedness.

Causes.—The optical defect of the myopic eye is sometimes congenital, often hereditary, but still oftener acquired. In any case it must be regarded as a diseased condition, and inflammation of the fundus of the globe may often be detected by the ophthalmoscope. The degree of Myopia is often increased by over-exertion of the eyes, and by increased amount of disease. Occasionally, indeed, the degree of Myopia may be diminished by senile changes, but, as a rule, short-sighted eyes get rather worse in advanced life.

It is conclusively established that long-continued use of the eyes at near objects, the application of the eyes in early childhood, perhaps by insufficient light and faulty distances or angles of the desks or tables, produce or increase Myopia. Short-sightedness is far more common among the educated —poets, artists, critics, etc.—than among the illiterate, proving that over-use of the eyes leads to the affection. At one of the colleges at Oxford, 32 in 127 students were myopic. Dr. H. Cohn found that of 132 compositors, 51·5 per cent. were myopic; of these 68 myopes, so large a number as 51 had in earlier life had unimpaired distal vision. Dr. Cohn's investigations also show that the percentage of myopes increased from the elementary school upwards, according to the increased demand for study.

City or town residence, again, by the constant self-adaptation of the eyes to short distances, is a powerful predisposing cause. It cannot but make a vast difference in the conditions of the interior of the eye in the course of years, much more in successive generations, whether it is daily employed in looking at walls a few feet distant, or, as in the country, at mountains and forests which often are in view miles distant. In the old cities of Europe, that have been occupied, perhaps, for forty or fifty generations, the majority of the inhabitants are near-sighted.

Treatment.—Irritability, tension, and heaviness in the eye, with pain around or in the eye, require Spig., Bell.. or Macrot., and if inflammatory symptoms are strongly pronounced, Acon. may be first given to allay them. If there is much venous Congestion, Ham. is indicated; this remedy may also be used in the form of a lotion (20 drops to half a tumbler of water). If the general health be much impaired, suitable remedies must be selected to meet the constitutional condition.

Accessory Measures.—The eyes should be rested till irritability is removed. The gentle use of the eye-douche, a weak collyrium, or a wash of simple tepid milk-and-water.

Spectacles.—In the majority of cases, no medical treatment is required, but only the choice of suitable glasses. These should not be purchased at random of opticians or vendors, but under the guidance of an oculist or physician who gives sufficient attention to the subject.

[In children, when the symptoms of myopia are first manifested they are often due to a spasm of the ciliary muscle and not to an actual change in the shape of the eyeball. If this be the case, it is manifestly wrong to advise glasses, but rather less work or absolute rest from close work for a time.

The child should be instructed to look at distant objects many times during the day, and should be encouraged in out-of-door sports and games. Agaricus, Jaborandi and Physostigma have proved very beneficial in these cases by causing a relaxation of the spasm of the muscle of accommodation.]

Inflammation of the Eyelids.

Symptoms.—Redness, soreness, and swelling along the margin of the eyelid, whence it spreads over the whole lid.

Treatment. *Aconitum.*—Febrile symptoms, and when the affection has arisen from exposure to cold. *Belladonna.*—Bright redness of the part; dread of light. *Apis.*—Much swelling (œdema). *Rhus Tox.*—Erysipelatous appearance of the lids; formation of small vesicles. *Hepar Sulph.*—Neglected cases, with suppuration. *Conium.*—Chronic.

Accessory Treatment.—Bathing the eyelids with warm water, or the early use of the cold compress. Exposure to cold draughts of air should be avoided.

Hordeolum—Stye on the Eyelid.

Definition.—A small, painful Boil, with slight inflammatory symptoms, projecting from the margin of the eyelids.

Cause.—Scrofula or debility.

Treatment. *Pulsatilla.*—This is the principal remedy, and should be the first administered, alone, or in alternation with Acon. If given very early, Puls. often disperses the Stye; one or two drops may also be applied locally.

Aconitum.—Inflammation, pain, and restlessness.

Sulphur. A dose morning and night, for a few days, to prevent a recurrence of styes.

Calcarea and Sulphur—Are chiefly valuable in frequently-recurring Styes, and especially in patients of a scrofulous constitution. They should be administered for a week each in

succession, as follows:—Calc., morning and night, for a week; then, after waiting two or three days, Sulph. in the same manner, repeating the course as often as necessary.

Auxiliary Treatment.—Fomentations with hot water, and if there is much inflammation, a bread-and-water poultice applied over it at night. If the Stye is tedious in breaking, it may be opened with a lancet, or punctured with a needle, and the matter gently pressed out. If dependent on general debility, hygienic measures are necessary to restore the constitutional vigor. Cod-liver oil is often required.

Entropium—Inversion of the Eyelid; and Ectropium—Eversion of the Eyelid.

Definitions.—Entropium is a growing inwards of the eyelid and lashes, so as to occasion great disfigurement, and constant irritation of the globe of the eye, often leading to Chronic Ophthalmia. It is generally caused by old Purulent or Granular Ophthalmia, and the employment of caustics, and chiefly occurs amongst the lowest ranks of society, especially the Irish. Ectropium is an eversion of the eyelid. It may result from burns on the face, or from thickening of the conjunctiva from Tarsal Ophthalmia (see the next Section).

Treatment.—This is similar to that recommended for Strumous Ophthalmia. Sulph., Merc., or Euphr. is generally required. Also cod-liver oil. Both conditions generally require surgical treatment, especially the skilful application of bandages to protect the exposed mucous surfaces, and to strengthen the tension of the obicularis muscle.

Accessory Means.—Great benefit will result from frequent cold or tepid baths, and the occasional local use of Calendula lotion (ten drops of Calendula to two tablespoonfuls of water). If the deformity result from a cicatrix on the cheek, such as from a Burn or Abscess, and surgical measures have to be adopted for its removal, this will be an excellent topical application. Also the Accessory treatment recommended in the next Section.

[Surgical interference is generally necessary to effect a cure in the above conditions.]

Tarsal Ophthalmia.

Definition. — An inflamed, thickened condition of the conjunctiva, and enlargement of its cilia, with disordered secretion of the meibomian glands, the cilia follicles, the conjunctiva, and the skin itself, causing irritation similar to that from foreign bodies. Eczema in the eyelid is a chronic affection, occurs chiefly in the young, and the consequences to the lids may remain for years, and even for life. It is popularly termed blear-eyes.

Symptoms. — The granulations are rough and uneven, and may sometimes be detected by the touch; there is an abundance of pus secreted, so that the eyelids stick together during sleep, becoming encrusted with dry mucus, chiefly from the meibomian secretion. The tarsal border becomes thickened and rounded, the lids are crusted, the *puncta lachrymalia* no longer catch the tears, and the excoriation and irritation of the edge of the lids are kept up by their constant overflow. The ulceration may be so deep as to destroy much of the skin, and even some of the tarsal cartilage. The usual variations common to Eczema are met with in this affection. It is chiefly confined to the upper lids, but sometimes extends to the lower; and the lids of both eyes are usually involved.

Causes. — Struma. Almost every case furnishes evidence of inherited or acquired Scrofula — enlarged lymphatic glands, swollen upper lips, sore ears, digestive derangements, tumid abdomen, or paleness and looseness of the skin. The disease may occur as the sequel of the eruptive fevers. Impure air, smoky and uncleanly dwellings, and especially over-use of the eyes in an unhealthy atmosphere, are also frequent causes.

Treatment.—The chief remedies are—Merc., Hep.-S., Calc.-C., Sulph., Clem.

Clematis Erecta.—Chronic inflammatory stage of the borders of the eyelids, with soreness and swelling of the meibomian glands, such as often occurs in scrofulous patients.

[An excellent preparation for tarsal ophthalmia is composed of 1 gr. Hydrag. oxyd. flav. to 1 drachm of Cosmoline, a small quantity to be rubbed along the tarsal margin at night, after a careful removal of all the dried secretions.

In these cases a careful examination of the refraction of the eye

should be made, for it is not infrequent to find some refractive anomaly which serves to perpetuate the irritation and inflammation at the margin of the eyelids.]

Accessory Treatment.—This should include frequent bathing with tepid milk-and-water, rest of the eyes, and the avoidance of impure atmosphere, cold winds, Indigestion, etc. Whatever may be the cause of the constitutional debility, it should be removed, and the general measures suggested in the Section on Scrofula carried out. Change of residence to a warmer part of the country, in obstinate cases, is often curative. *Local measures.*—The application of a simple cerete to the edge of the tarsi at night does good. When there is much agglutination in the morning, with scurf at the root of the eyelashes in the daytime, and a general unhealthy condition of the eyelids, a weak Sulphur ointment (5 gr. sulphur to 3 scr. adipis.) is useful; it should be applied with a sable brush, morning and night, after the part has been well cleansed, and every particle of dried secretion washed off with warm water and transparent soap.

CHAPTER V.

DISEASES OF THE EAR.

Diseases of the External Meatus.

(1) Eczema.

The cutaneous affections to which the external ear is liable are, chiefly, Herpes, Erysipelas, Impetigo; Pemphigus, and Eczema. The last is probably the most common, and is generally of the chronic variety. It appears most commonly behind the ears, but also invades the auricle, and not unfrequently extends to the meatus. When this extension takes place there is some degree of deafness, in addition to the great smarting and itching which characterize the disorder. The general causes and symptoms are similar to those of Eczema when it occurs in other parts of the body.

Treatment.—Bell. or Puls. for the smooth variety; Rhus or Ver.-Vir. for the vesicular; and Ars. or Sulph. for chronic cases.

Accessory Treatment.—This consists chiefly in dusting the part with flour or finely-powdered starch to soothe irritability, and to absorb any fluid that may exude. A warm douche may be used occasionally, when the canal is involved, to allay itching and to prevent the accumulation of matter within. Great care should always be exercised to dry the ears and hair of children after being washed. Wet compresses favor the spread of inflammation, as also do ointments generally; but we have found the following efficacious in promoting the cure of Eczema behind the ears: six gr. Merc. Præcip. rubri; six ounces Axungiæ. Daily soft water baths for the general surface of the skin, the use of small quantities of uncooked vegetables, such as lettuce, watercress, celery, etc., and the correction of any derangements of digestion and assimilation will favor the cure of Eczema, Erysipelas, and other cutaneous affections of the ear, as they do when these diseases affect other portions of the skin.

(2) Hardened Cerumen.

Cerumen, or ear-wax, is composed of oil, stearine, a little coloring matter, scales of epidermis from the lining of the meatus, and other substances. It contains only about 0·1 per cent. of water, and is only very partially soluble. After remaining for some time in the canal, its watery constituent passes off by evaporation, and thus it becomes a hard mass. In advancing age, the cerumen seems to contain a less proportion of water than during the earlier periods of life, for it becomes drier and more brittle. The function of the ceruminous glands which secrete the wax seems to be to eliminate a product which will render the canal pliable, and perhaps also prevent the entrance of insects.

The increased secretion of the ceruminous glands is a cause of deafness, but not the sole cause in the majority of cases where it exists. It is frequently the sole apparent cause, and must therefore be treated *per se*, unless other symptoms indicate the application of other remedies.

Causes.—The commonly-alleged cause of hardened ear-wax is a "cold," although frequently there is no evidence whatever that

the patient has suffered from any catarrh of the head or throat. In some cases it may be due to neglect of cleanliness, or to the use of the twisted end of a towel pushed too far into the canal, or to some similar method of cleaning the ear, which tends to impact the cerumen or to exhaust its watery element. But in the majority of cases the disorder is not simply a local or idiopathic affection, but a sign of some inflammation of the mucous membrane lining the meatus, or of a diseased state of the ceruminous glands, consequent on the degenerative changes of old age lessening the nutrition of parts of the organ of hearing other than the auditory canal.

Symptoms.—Defective hearing which has come on suddenly; tinnitus aurium, and other nervous symptoms—vertigo, giddiness, pain in the ear, probably from pressure on the membrana tympani. In aged persons, especially, chronic accumulations may lead to absorption of the bony walls of the meatus.

Diagnosis.—The deafness, instead of being constant, is intermittent; the hearing is better in the morning, or after eating, or after rubbing the ear with the finger, or after insertion of the finger in the meatus. The deafness may be increased by cold and inflammation. Diagnosis is best effected with the ear mirror and speculum.

Treatment.—It is doubtful whether medicines will do anything to restore the normal functions of the glands, but the disorder may be palliated by the removal of the wax. The wax is best removed by a careful use of the syringe, throwing a small jet of water, at the temperature of full blood heat, along the roof of the meatus. If the water be too hot or too cold it will cause giddiness. If pain ensue, the syringing should be discontinued. In syringing, the ear should be seized with the thumb and finger of the left hand, and pulled gently upward and backward as far as it will go, thus straightening the meatus. If the wax be not removed within a few days, a few drops of warm almond-oil, or glycerine, or warm solution of soda, put in the ear at night will soften the wax and facilitate its removal. To ascertain the progress of removal, the ear should be frequently examined with the speculum. Dr. Petrequin, of Lyons, has made experiments to discover the best solvent of wax, but found nothing so effective as simple warm water.

[A small quantity of cosmoline melted and while warm poured into the ear will be found far the best solvent for hardened ear-wax.]

Absence of Wax.—Sulph., Graph., or Spong., will be found remedial.

(3) Furuncle, or Abscess of the Meatus.

This is a very common, painful, and somewhat serious disease, to which some persons seem peculiarly liable. It is often associated with boils in other parts of the skin. The frequent recurrence of abscesses causes thickening of the walls of the meatus and of the drum, and, if the tendency to them is not eradicated, some degree of deafness is an invariable result. They are always exquisitely painful, and produce very decided tenderness around the ear. They are liable to recur.

Symptoms.—Acute, throbbing, darting pain in the meatus, great tenderness, tense swelling, temporary partial deafness, consequent on obstruction of the canal.

Treatment.—*Belladonna.*—Local redness; headache; flushed face; throbbing. If taken promptly, on the first appearance of inflammation, this remedy will often prevent the formation of the Abscess.

Merc.-Sol.—This is appropriate before suppuration sets in, and may be alternated with Bell.

Silicea.—If Bell. does not prove arrestive, this medicine will often succeed.

Hepar-Sulphuris.—If the Abscess be formed, its suppuration will be facilitated by this remedy, and its extension within the meatus prevented.

Sulphur.—This should be given after the resolution of the abscess to prevent re-formation, and to correct the constitutional diathesis.

Accessory Treatment.—A free use of fomentations and poultices as hot as can be borne will relieve the acute pain often experienced, and hasten the formation of matter. The Abscess should be opened early, as soon as the throbbing indicates the formation of matter, because the tissues are so dense here, that spontaneous rupture is a long and very painful process, and the

bone may become carious. When Bell. is given internally to mitigate pain, a topical application will be serviceable. A little piece of lint may be moistened with two or three drops of the tincture, and introduced into the ear. Subsequent cold must be averted by avoiding draughts after fomentation, and by insertion of cotton wool in the ear. The latter is desirable for the absorption of the suppurating matter, but should be frequently changed, lest, by drying, the wool should increase the irritation.

[A small bit of absorbent cotton wet in glycerine which has been diluted one half with water, and well warmed, may be inserted into the swollen, inflamed canal and give considerable relief.

If the trouble shows a disposition to be recurrent, some stimulating ointment should be used in the auditory canal in the intervals of the acute symptoms: 2 gr. Hydrag. ammon. to one-half ounce Cosmoline is highly recommended.]

Disease of the Tympanum.

(1) Acute Otitis Media.

Inflammation of the middle ear is rife in changeable climates. In the acute form the process may stop at the formation of an increased quantity of mucus, or may go on to the production of pus.

Symptoms.—Pain, at first of a dull, aching character, which is accompanied by a sensation of stoppage in the ear; as the disease progresses the pain increases in severity, and becomes throbbing or piercing and almost unbearable.

Causes.—Exposure to cold and damp, and the presence of naso-pharyngeal catarrh, which extends through the Eustachian tube to the tympanum. In the latter manner the ear becomes implicated in the course of the various exanthemata. The disease may also be coincident with affections of the skin or mucous membrane in other parts of the body; these causes are especially operative in weak, neglected, or scrofulous children.

Treatment.—Aconite (early stage of inflammation); Belladonna (congestion; cerebral symptoms); Pulsatilla (inflammation following Measles; darting, tearing pains); Mercurius (pains

extend to the teeth, and are worse in a warm bed; following Small-pox); Chamomilla (excessive, almost unbearable pain); Sulph. (Convalescence.)

Accessory Treatment. — Fomentations and poultices are of very little, if any use, and should be avoided. The pain may be best palliated by filling the ear with the following mixture and covering it with a plug of cotton—

Aconite tincture, 5 drops.
Magendie's Sol. of Morphine, 2 drachms.

It should be applied warm.

[For the relief of the pain in acute otitis media, hot water should be resorted to from the start. It is best applied by a fountain syringe, nasal douche, or any instrument that will give a continuous stream, as the jerking unsteady manner in which the ordinary syringe often works would aggravate rather than relieve the pain.

The water should be as hot as the patient can bear, the heat being the main thing for subduing the inflammation at this stage, and it may be used as often and continued as long as it feels grateful to the sufferer. A hot pillow, or bags filled with hot salt or bran are productive of relief; in young children warm tobacco smoke blown into the ear will often quiet an earache. These measures, if instituted sufficiently early and followed up vigorously, may check the disease without the formation of pus; but if the pain continues, and the drum head seem to be red and bulging, it is evident that suppuration has commenced, and it becomes necessary to puncture the membrane to allow an exit for the pus confined within the tympanic cavity. If violent pain continues after an opening has been made and free suppuration established, it is a serious symptom, for it generally indicates an extension of the disease to the osseous portion of the ear.]

(2) Chronic Aural Catarrh.

The pathological process above described is often a very gradual and persistent one, as well as one upon which the large majority of cases of deafness depend. Indeed, in climates which are rapidly changeable few perfect ears exist. Many persons who would feel offended if called deaf are really so in some

degree from this cause. The small cavity of the tympanum becomes clogged with mucus; the mucus membrane thickened; the joints of the ossicle partially anchylosed; the base of the stapes more or less restricted in its motions, and the membrane of the round window and drum warped and stiffened. Tinnitus is common and very distressing.

Causes. — The usual one is the neglect of existing naso-pharyngeal catarrh, and its consequent extension through the Eustachian tube to the tympanum.

Treatment. — Next to nervous deafness this is the most incurable form. Medicine is absolutely valueless, unless used in conjunction with frequent stimulation of the ear to the borders of inflammation by the negative pole of the constant current. Local treatment of this and other kinds at the hands of an experienced aurist is alone to be recommended. Even this generally fails to do more than partially restore the hearing. The general practitioner may serviceably make an energetic use of Politzer's air-douche once daily for a month or two.

(3) Otitis Media Purulenta.

In cases where the inflammation above described (under Acute Otitis Media) increases considerably, pus is formed in the middle ear, and often to such an extent as to rupture the drum. This is the source of all chronic discharges from the ear which were formally classed as Otorrhœa. In short, whenever chronic discharges from the ear are seen we may confidently say that the drum is ruptured, and that their source is the middle ear. The *rationale* of this is at once clear when we consider that pus is never formed on an unbroken cutaneous surface, and such is the surface of the whole extent of the meatus externus. Of course ulcerative conditions may exist here, but they are very rare.

Symptoms. — These are the same at the outset as those described under Acute Otitis Media. After rupture of the drum, in many cases, no symptoms exist except deafness and discharge. However, when the disease invades the mastoid cells, and perhaps goes on to the formation of abscess, the pain is again excessive. The patient becomes delirious, then comatose. The mastoid process becomes swollen, red and tender, and the whole situation

is exceedingly dangerous. In any case, before rupture, or incision of the membrana tympani, pain is excessive. Even while comatose, the patient cries out, rolls his head, and seems in the greatest agony. The diagnosis between this condition and actual Meningitis or Cerebritis is often very difficult, and serious mistakes are frequently made. However, with the rupture of the drum comes such sudden and immediate relief that one cannot be long in error.

Causes.—It usually follows an ordinary cold, and is commonly met with in scrofulous children. In such constitutions, it is likely to be a sequel to the eruptive fevers, Whooping-cough, Croup, or any exhausting illness; the tympanum should therefore be frequently examined for the detection of the first symptoms of the disorder.

Treatment.—*Mercurius.*—Thick, bloody, and fœtid discharge, accompanied by tearing pains in the affected side of the head and face, and swelling and tenderness of the glands about the ear. Also when the disease has followed Small-pox.

Hepar Sulph.—Discharge of pus and blood; and when the patient has been dosed with Mercury.

Capsicum.—An especially valuable remedy. It seems to have a specific relation to the ear, and is often curative even when the mastoid cells are implicated (*Haughton*).

Pulsatilla.—Discharge of a thin watery character, or purulent, and when it follows Measles or Mumps. K.-Bich. is indicated by similar conditions.

Ac.-Mur.—A remedy of great value in affections of the ear consequent on Scarlet fever; or Eczema, with burning itching.

Arsenicum.—Excoriating discharge, in feeble constitutions.

Causticum.—Otorrhœa with eruption behind the ears and about the nose in scrofulous subjects.

Calcarea and Sulphur.—Tedious cases; scrofulous patients; the former may be administered morning and night for a week, to be followed, after a couple of days' interval, by the latter.

Ac.-Nit., Iod., Aur., Merc.-Iod., Sil., K.-Hydriod., or Tellur., may also be required in some cases.

Electricity has been successfully employed.

Surgical Treatment.—Should the disease not speedily yield

to remedies, paracentesis of the drum should always be performed. When grave brain symptoms accompany evident disease of the mastoid cells, trephining of the process should be early resorted to. No fear need be entertained lest an artificial perforation of the drum may not heal. The difficulty lies in preventing its healing before the disease is cured. In fact, to avoid this difficulty, the operation must at times be often repeated. Even spontaneous ruptures heal rapidly. Only in neglected and chronic cases, where the aperture is large, does it remain open. Nor, if the inflammation be cured, is a rupture of great detriment to the hearing. In fact, where the membrana tympani is thickened from chronic inflammation, paracentesis often improves the acuteness of hearing very decidedly.

When the discharge is abundant the practice of filling the ear with cotton, or wool, is a bad one, since it tends to confine the pus, which should have free exit. Frequent syringing is advisable, and, if this is carefully attended to, cotton may be worn with advantage when in the open air, but not in a warm room. Poultices and fomentations are of no service, and are dirty and disgusting. Relief from pain is best given by the local application of Aconite and Morphine. It should always be warmed before it is used.

In opening the mastoid cells a free crucial incision should first be made down to the bone itself, while the patient is under the influence of an anæsthetic. The bone may then be perforated with a small trephine. A common gimlet is perhaps as good an instrument as any.

General Measures.—The intractable character of this affection is often, in great measure, due to the neglect of that strict cleanliness which is so necessary to be observed. The irritating discharge, if allowed to accumulate within the meatus, undergoes decomposition, and gives rise to changes in the deeper structures of the ear, the nature of which may be inferred from the irritation and excoriation so often existing in the external orifice. A little fine wool, frequently changed, may be put into the ear when the discharge is declining, to protect it, out of doors, in cold weather; but even this should be done with great caution, particularly when the discharge smells offensively, for nothing can be more

prejudicial than stopping the ear with cotton-wool to prevent its escape. All fluids injected into the ear should be warm.

Carbolic Acid lotion is of great value in Otorrhœa. The following are the proportions in which it may be safely prescribed:

Carbolic Acid, one drachm;
Distilled water, one ounce;
Glycerine, five ounces; mix.

The improvement of the general health of the patient is a point of great importance; for this purpose, change of air, and, in the autumnal months, sea-air, is often attended with most beneficial results. In the absence of sea-air, country-air, in a bracing district, is of great advantage. Cod-liver oil is also strongly recommended.

(4) Chronic Otitis Media Purulenta.

This form of ear disease may be considered as synonymous with the obsolete Otorrhœa, and is a very common affection. Most frequently it will be found to be a sequela of Measles and Scarlet fever, where during their course an acute Otitis has occurred. Very few symptoms exist in these cases except the presence of a discharge (which may be muco-purulent, purulent, or sanious), and a variable amount of deafness and perhaps tinnitus.

Treatment.—In addition to the remedies given in the preceding sub-section, Tellurium should be administered where the discharge smells like fish brine. Where Silicea would ordinarily be prescribed one of its salts is preferable. The Silicates of Soda, or Lime may be used from the first to the third alternation. They are by far the most universally useful medicines in this disease.

Accessory Treatment.—All medicines will frequently fail to cure chronic cases of this kind, so small a part is affected; it has been so long diseased as to have become a "second nature;" and other points of irritation perhaps absorb the influence of the drug; at any rate it fails, except very occasionally, to effect a cure. Resort therefore must be had to that coarser form of homœopathic treatment which is found in the use of local remedies. Lotions of various kinds are of great use here. When a rupture

is so large that a liquid will readily flow through the drum into the middle ear, simply filling the ear with it is sufficient. When it is small, however, it must be forced through. The nozzle of the ear syringe should be wound round with yarn, or surrounded with an india-rubber ring, till it is sufficiently large to fill the meatus. Then after filling the instrument it should be firmly pushed into the meatus, and the fluid by this means forced into the middle ear, and perhaps even through the Eustachian tube into the pharynx. Thus all the inflamed surfaces will be bathed with it. The following lotions have proved very useful:—

Silicate Sodæ (sat. sol.), 5 to 10 drops; warm water, 1 ounce.
Argent.-Nit. 5 grains; alcohol and water, each 1 ounce.

Pure alcohol is often not too strong in these cases, and is very efficient indeed as a lotion. The first effect of a lotion will often be to produce an increased discharge of a serous nature. In the course of a few hours this subsides, and it is evident that improvement has set in. The injection or lotion should not be repeated until the improvement has ceased to progress. An interval of 24, 48, or 72 hours is desirable.

It is a very common and very foolish idea, which has been fostered in the minds of the laity by ignorant or indolent physicians, that it is dangerous to cure a discharge from the ear. It is doubtful whether a single instance of evil results, under wise treatment, can be cited. Of course irritating lotions too often repeated may set up an acute Otitis based upon the chronic condition, but it very rarely happens; but the idea that the ear in these cases serves as a vent-hole for peccant humors is worthy only of the pathology of the dark ages. The continuance of this disease not only makes the patient a filthy and disgusting nuisance to himself and all around him, but it often greatly endangers life itself. True, where any dyscrasia exists the appropriate specific should be used internally, but an ulcer here can be as safely healed as anywhere on the body, and if not healed incurable deafness of a high degree is certain to follow.

Suppurative Disease of the Labyrinth.

This disease occurs as a sequela of Cerebro-spinal Meningitis. As the patient begins to recover consciousness, he is found to be

very deaf. The inflammation of the meninges of the brain has extended along the sheath or neurilemma of the auditory nerve into the labyrinth, and an inflammation of the tissues here, which dissection has shown to be of a suppurative form, has begun, perhaps progressed even to its final stage. It is evident that the organ of Corti is involved, since, on recovery, the ability to hear only certain tones is often retained, while words can no longer be distinguished. Frequently the whole organ is destroyed, and deafness is absolute.

This disease has hitherto been considered hopeless of cure. We are happy to say, however, that here as elsewhere homœopathic treatment brings a prospect of better results. Dr. W. S. Searle, of Brooklyn, Mass., U. S., records one case of entire recovery in an undoubted case, and in another, which came under treatment five weeks after, absolute deafness occurred; complete restoration as to the hearing of sounds was accomplished, but words could not be distinguished. In the latter case Silicea 30 was the remedy. In the former, which occurred in his own practice, the patient, a lad of ten years, was found, on recovering consciousness after a severe attack of Cerebro-spinal Meningitis, to be able to hear only loud shouting close to the left ear, while in the right, hearing seemed absolutely gone. Treatment with Mercurius Sol. 2, followed by Kali.-Iod. 1, Hep.-S. 3, and Silicea 30 restored the boy to perfect hearing within two weeks. Dr. Searle avows his belief that a like happy result may be achieved by similar treatment in any case in which the disease is recognized sufficiently early.

Deafness.

Varieties and Causes.—(*a*) *Functional or Nervous Deafness.*—This variety depends upon constitutional debility; the same conditions which weaken and relax the general muscular and nervous systems act injuriously upon the ear. Functional Deafness is painless; it is better when the digestive organs are unimpaired, the spirits exuberant, and the weather fine.

(*b*) *From Disease.*—Under this head we may mention—organic changes in the brain; obstruction of the internal ear; Ulceration and Perforation of the tympanum; Paralysis of the acoustic

nerve; various acute or chronic inflammatory affections, and disease of the throat (Throat deafness).

(*c*) *Deaf-dumbness.*—This is due to congenital malformation of the ear, and is irremediable.

Other causes are—the application of cold; sudden loud noises; blows on the head, as boxing a child's ears, or fracture, which leads either to Concussion or Rupture of the auditory nerve; swelling of the lining membrane. Accumulation of hardened ear-wax, exfoliated scarf-skin, or other substances lodged in the ear-passage, may cause deafness by obstruction. The Deafness that results from Catarrh is often but an aggravation of pre-existing Deafness—all the share the Cold has in the production of the disease being that of reducing the hearing power a little further, and so rendering the defect more obvious.

Prognosis.—In forming an opinion as to the chances of recovery, or of amelioration, the following circumstances should be duly taken into account: age of the patient; hereditary tendency to Deafness, or the association of the malady with any constitutional disease, or with cerebral symptoms, or with the nervous temperament. If a patient come to us with Deafness who has suffered from scrofulous enlargement of the Tonsils, chronic Catarrh, Rheumatism, Gout, or secondary Syphilis, our hope of a favorable result will be greatly diminished. Deaf persons sometimes state that they can hear well under exceptional circumstances, as in the noise of a railway carriage, a crowded thoroughfare, or amidst the whirl of busy machinery; these and similar sounds, which suspend the hearing of healthy persons, furnish such a degree of abnormal stimulation as to excite the dull nerve to unwonted quickness of hearing. The inference from this unhealthy condition of hearing must be regarded as unfavorable for the prospect of recovery.

Treatment.—The cure of Deafness of course depends on the removal of the cause; in many cases this is practicable; in some it is not. In most cases, however, skillful treatment is successful, and it is very rare indeed after a course of homœopathic remedies for a patient not to find his hearing-power decidedly and permanently stronger. Recent cases are of course most hopeful. But long-standing cases, even when both ears are affected, are generally benefited to a greater or less extent.

Epitome of Treatment.—1. *From Debility of Constitution, Struma, etc.*—Phos. (nervous); Chin.-Sulph. (nervous and periodic); Iod., Ac.-Phos., Cact. (with Palpitation); Petrol. 3x, Spong., Ars.

2. *From Cold.* — Acon., Puls. (recent); Merc:, K.-Hydriod. (chronic); Dulc. (from damp); Bry. (with Rheumatism.)

3. *After Fevers, etc.* — Bell. (with giddiness); Puls., China, Sulph., Ac.-Phos.

4. *From Suppressed Eruption about, or Discharge from, the Ear.*—Sulph., Hep.-S., Aur.

5. *From Enlarged Tonsils, etc.* — Merc.-Iod., K.-Hydriod., Merc.-Cor., Iod.

6. *From Concussion.*—Arn. (also when Deafness is accompanied with a crawling sensation in the ear).

7. *Noises in the Ears (Tinnitus aurium).*—Bell., Chin.-Sulph. (with Deafness); Nux V. or Ign. (with unnatural sensitiveness to sound); Bapt. (roaring, confusion of mind, dullness of hearing); Gels.

Accessory Means.—If Deafness be found to arise from an accumulation of hardened ear-wax, this should be removed by the syringe and warm water All reputed remedies which have to be dropped into the ear should be eschewed, however much they are recommended. See also "General Hints," following.

General Hints on Affections of the Ear.

(1) Wet or Damp Ears.—A frequent cause of disease of the ear is the practice of leaving the head and ears of children imperfectly dry after washing. It is the more necessary to guard against this danger if there already exist any discharge from the ear. After bathing, the greatest care should be taken to dry the hair and ears thoroughly. As a further precaution, a piece of fine linen or blotting-paper should be twisted into a coil, and gently introduced into the cavity of the ear, to absorb any remaining moisture.

(2) Boxing the Ears.—Parents, governesses, and others who have the care of children, should be aware of an accident very liable to occur from blows on the head or boxing the ears, namely, rupture of the *membrana tympani*, a membrane which closes the

bottom of the meatus, and is stretched something like the parchment of a drum. The accident may be recognized by a sense of shock in the ear, Deafness, and a slight discharge of blood from the orifice; and if examined by an ear speculum, the rent may be seen. There should be complete rest for several days, and a weak Arnica lotion used.

(3) **Deafness not Stupidity.**—Another point of considerable importance is the case in which a child, from being slightly deaf, has been thought to be stupid or obstinate.

(4) **Wet Compress.**—A small wet compress, covered with oil-silk or tissue, worn over the nape of the neck, as recommended for Ophthalmia, is equally applicable in affections of the ear, especially when of an obstinate nature; and if persevered in steadily for some time will frequently relieve chronic ailments.

(5) **Dilutions of the Medicines.**—Lastly, a remark may here be made, bearing on the treatment of the diseases of the ear. In all chronic affections of this organ, the higher dilutions (6x to 12x) of the different medicines are generally more efficacious than the lower (1x to 6x).

CHAPTER VI.

DISEASES OF THE NOSE.

Ozæna.

Definition.—Ozæna (from a Greek word signifying a stench) is a disease in which there is Ulceration of the mucous membrane of the nose, from which fœtid, purulent, or sanious matter is discharged. There is often lachrymation from obstruction of the ducts leading from the lachrymal glands to the nose.

Causes. — Uncured Catarrh; fevers; Syphilis; mechanical injury; foreign bodies in the nostrils; or it may arise from an unknown cause. A strumous constitution no doubt predisposes to the disease.

Treatment.—The disease, especially if chronic, is not easily cured; but in most cases may be greatly benefited.

Aurum. — Pain above the nose; heat and soreness of the nostrils; discharge of yellowish-green fœtid pus.

Kali Bich.—Thick, tenacious, sometimes bloody, discharge, in the form of "elastic plugs." (2x dil. sometimes required.)

Iodium.—Great fœtor, the Schneiderian membrane undergoing putrid Ulceration.

Mercurius Biniod.—Sanious discharge; destruction of the septum and bony structure of the nose.

Acid.-Nit.- -Syphilitic Ozæna; and when the patient has been drugged by large doses of Mercury.

Arsenicum.—Ichorous, fœtid, and malignant discharge, particularly if the constitution is much shattered.

Sang. and *Ham.* are said to be good remedies.

Zinc.-Met.—The nose swells, and is sore; loss of smell, dryness, and lachrymation.

Cycl. (frequent sneezing); Gels. (watery flow); Phyto. (mucous flow); Sticta (dryness).

Accessory Measures. — Perfect cleanliness of the nasal passages is imperative; the nose may be syringed with tincture of Iodine (eight drops to eight ounces of water), injecting with a large syringe, daily.

Epistaxis—Bleeding from the Nose.

Although this is ordinarily a trifling affection, it requires some discrimination to decide when to interfere and when to let it alone; for it may be a symptom of the most diverse condition of the constitution.

In simple cases, when the discharge is trifling, no treatment is necessary; that suggested below is for cases in which the bleeding is excessive, long-continued, oft-recurring, or in which it arises from a debilitated state of the constitution; for then the loss may be serious, and indicate a grave systemic condition.

Symptoms.—Giddiness, weight, or oppression in the forehead often precede the Hæmorrhage. Generally only one nostril bleeds. Sometimes the blood, instead of escaping in front, passes through the posterior nares into the fauces, and thence into the

larynx or stomach. In the latter case, without careful investigation, it might be mistaken for Hæmorrhage from the lungs or stomach.

Treatment.—*Hamamelis.*—Venous Hæmorrhage, where the blood oozes or drops from the lining of the nose; Epistaxis from the hæmorrhagic diathesis; also when the degenerative changes in the blood-vessels, as in old age, favor the discharge.

Aconitum. — Hæmorrhage from arterial excitement, or from passion. It is specially suited to plethoric persons.

Belladonna. — Cerebral Congestion; Epistaxis preceded by throbbing headache and fullness in the forehead and temples.

Arnica.—From a blow, fall, or physical exertion; *Secale*—during fevers, etc.; *Podoph.* or *Puls.* —when the Hæmorrhage is vicarious of the monthly period; *China*, after the bleeding, when it has been excessive.

Accessory Means.—The application of cold water or ice to the forehead, neck, or back, raising the arms above the head, and holding them so for a short time, or pressing horizontally on the cheek-bone with the fingers, just above the bleeding nostril, and so compressing the blood-vessel, generally arrests the Hæmorrhage promptly. If, in spite of these means, the bleeding continues, a piece of lint should be rolled into the shape of the nostril, saturated with the tincture of Hamamelis, and twisted rather tightly into the bleeding nostril, or into each, if the bleeding comes from both. Before inserting the plugs any clots of blood should be removed. This treatment is recommended on two grounds—the styptic effects of the Hamamelis, and the support of the vessels by the tightly-fitting plug. The patient should be placed in the recumbent posture, and the temperature of the room reduced.

Plethoric persons predisposed to Epistaxis or to Congestions should lead a temperate life, avoid stimulants, use frequent ablutions of cold water, and take moderate exercise daily, in the open air. Immoderate exertion, fatigue, and much stooping are injurious. Delicate persons, of spare habit, are benefited by nourishing food. When bleeding from the nose frequently or periodically recurs, a change of air, and a more or less complete change of habits, are generally necessary to overcome the predisposition.

Polypus Nasi—Polypus of the Nose.

Varieties.—Polypi are of two kinds, and are generally located either in the nose, ear, throat, womb, or rectum.

(*a*) *Gelatinous Polypi* are composed of the elements of the mucous membrane; they are pear-shaped, of yellowish color, and consist of several soft, pedunculated, pendulous Tumors, streaked with a few blood-vessels. Their texture is so spongy as to imbibe atmospheric air, which renders them larger in damp weather than in dry. Polypi of the nose are usually numerous and of various sizes, and sometimes extend to the fauces, causing great obstruction in breathing. After removal they are apt to return.

(*b*) *Fibrous Polypi* are much less common; they are often of a malignant character, and the cause of much suffering.

Symptoms of Nasal Polypi.—A nasal sound in the voice; the patient acquires the habit of keeping his mouth open to facilitate breathing; difficulty of swallowing liquids; the nose is enlarged externally on the affected side, and on looking up the nostril the Polypus may be seen. In consequence of the stuffy symptoms which a Polypus occasions, it may at first be mistaken for a Cold in the head. But on the nose being violently blown, the Polypus descends and appears near the orifice, causing the obstruction to return, contrary to the usual result of such an operation.

Treatment.— Calc.-C., Merc.-Iod., K.-Bich., Phos., Teuc., Thuja, Sang. (internally, and powder of it externally), and Opi. have proved the most successful remedies. Tannin is also recommended to be blown up the nostril as a snuff through a quill daily.

In the choice of one of the above remedies reference should be made to the general constitution of the patient, and it should be used locally, in a more concentrated form, as well as internally.

In most cases it is necessary to remove these growths by surgical means. After their removal, dilute Ac.-Nit., applied by a long camel's-hair pencil, and also sniffed up.

Loss or Perversion of the Sense of Smell.

This condition is generally consequent on some other affection, especially chronic Catarrh.

Treatment.—When recent, and dependent on catarrhal Cold, or Rheumatism, Acon. in a low dilution will be readily curative. We have cured chronic cases, from similar causes, with Puls. or Merc., according to the condition present. Sulph. is also valuable in perverted smell.

Gels., Sang., Sepia, and Calc.-C. have been recommended.

CHAPTER VII.

DISEASES OF THE CIRCULATORY SYSTEM.

Diseases of the Heart and its Membranes.

Diseases of the heart command much attention in the present day, not only on account of the frequency of their occurrence, and the serious consequences they often involve, but also as the result of our more perfect acquaintance with the organ both in its healthy and morbid conditions.

Causes. — The most common causes of Heart-disease are—Rheumatic fever in the young; over-work of mind and body, anxiety, and too little rest in middle life; and Kidney-disease and Atheroma in older persons. The potency and frequency of the second class of causes are obvious. Life is too frequently one round of perpetual excitement, business haste or competition, and railway-speed pursuit of pleasure or gain. The demands thus made on the ever-active organ lessen its nutrition, impair its structure, and imperil its action.

Touching diseases of the heart, we may at once state that all affections so characterized are not organic, but often merely functional, and due to temporary causes, as Palpitation from debility, Indigestion, etc. On the other hand, cases of sudden death frequently occur, which are supposed to be due to Apoplexy, but which are consequent on Heart-disease.

Treatment.—Organic affections of the heart may be greatly relieved and life considerably prolonged by judicious treatment. Professional judgment and experience are, however, specially

necessary. For affections of the heart consequent on over-exertion and insufficient rest, Arnica is an excellent remedy. Other remedies, for affections from other causes, are pointed out in the following Sections.

Angina Pectoris—Breast-Pang.

Definition.—Sudden, severe paroxysms of pain, or Spasm of an enfeebled or diseased heart, with a constricted, burning sensation, and intense anxiety, chiefly occurring in elderly persons, or past the middle period of life.

Symptoms.—The patient is seized with a sudden dreadful pain, which centers in the heart, and extends over more or less of the anterior portion of the chest, up the shoulder and down the arm. There is an agonizing sense of anxiety, faintness, fear of instant death, Palpitation and dyspnœa, so that if walking he is compelled to stop and fix on the first object that offers support, and so remains, pale and covered with a clammy perspiration. The paroxysms may terminate in a few minutes, or last for hours, and are liable to recur with increased severity, till at length one proves fatal.

Causes.—Disease of the heart, or obstruction of the coronary arteries, in consequence of which the muscular fibres of the heart become impaired. Under such conditions a paroxysm may be brought on by over-exertion, flatulent distention of the stomach, mental excitement, or even a frightful dream.

Treatment — Leading Indications.— *Aconitum.* — Recent cases, and for plethoric patients; when there is a great sense of suffocation, anxiety, and throbbing.

Digitalis.—Cases in an advanced stage, the paroxysms recurring frequently and suddenly.

Veratrum.—Slow, intermittent pulse, cold extremities, cold perspirations.

Arsenicum.—Extreme dyspnœa, increased by the slightest movement, marked debility, pale and haggard face, feeble and irregular pulse, and dread of immediate death. Ars is also valuable as an agent for warding off the paroxysms of this painful disease.

Cactus Grand.—When there is "a feeling as if the heart were

grasped and compressed as with an iron hand" (*i.e.*, Spasm); Rheumatism.

Sambucus.—Violent dyspnœa, awaking from sleep with a suffocative sensation, and dreadful anguish about the heart.

Cuprum Acet.—Drs. Bayes and Holland have both reported cases of Angina cured by this remedy. Although we have had no personal experience with the remedy in Angina, it is doubtless of great value in this terrible affection.

Nux Vomica.—Indigestion, the attacks being attended or followed by flatulence.

Nitrite of Amyl.—This is a remedy which has been recently introduced, and which is pronounced by some authorities to be the remedy *par excellence* for Angina Pectoris.

Accessory Treatment.—Brandy or some other diffusible stimulant, in frequent small doses; a large hot bran poultice over the region of the heart; and warmth to the extremities.

Syncope—Fainting-Fit—Swooning.

Definition.—A loss of volition and muscular power, with partial or complete loss of consciousness, due to defective nervous power.

Causes.—Debility from constitutional causes, or from loss of blood or other animal fluids; emotional disturbances—fright, sudden joy, grief, etc., Hysteria, etc. Many persons faint on seeing blood or a wound, or from the sight of operations, etc.

Epitome of Treatment.—1. *For the fit.*—Camph., Mosch., Ammon.-Carb., or Acon. If the patient be unable to swallow any of the above remedies in strong tincture, especially the first two, they may be administered by olfaction. At the same time, all tight clothing should be loosened, the patient exposed to cool air, and cold water dashed on the face. The invariable tendency to the horizontal posture is a conservative one, and should not, therefore, be interfered with.

2. *For the debility.*—China, Ars., Iod., Ver.-Vir.

3. *Fainting from affection of the heart.*—Mosch., Dig., Ver.-Vir.

Preventive.—Reference must be had to the constitutional state which causes fainting from trifling circumstances, in order to correct the tendency.

Palpitation and Irregularity of the Action of the Heart.

In a healthy condition, we are scarcely sensible of the heart's beat; the perfection of action, therefore, is indicated by entire unconsciousness that such action exists at all. Palpitation is evidence of a want of balance between the blood to be driven and the power of the heart to drive it. It is not, then, evidence of excessive power, but that the muscular power has been taxed and found unequal to the demand. "It is laboriousness, not excessive power, that is indicated by Palpitation" (*Fothergill*). When, however, the pulsations of the heart become much increased in force or frequency, or both, the unpleasant sensation known as "Palpitation" is experienced.

Palpitation and Disease of the Heart.—We infer Palpitation to be the consequence of functional disorder, as of Indigestion, when it occurs only occasionally, and when the action of the heart is uniform during the intervals. In medical practice the fact is often observed, that patients with serious organic disease of the heart rarely suspect anything radically wrong until the disease has made considerable advances; while patients with mere functional disorder of that organ frequently entertain the gravest apprehensions. Most cases of Palpitation are from functional disorder and not from structural disease, and are consequently quite curable. Sometimes, from nervous irritability, some of the great arteries, particularly the abdominal aorta, take on an inordinate action, which might be mistaken for Aneurism.

Causes.—*Predisposing.*—A nervous temperament; Hysteria; a full habit; and Disease of the heart. *Exciting.*—Excessive joy, grief, fear, and other mental emotions; severe or prolonged exertions; profuse discharges; menstrual derangements; a disordered —especially an overloaded stomach; flatulence, etc. Whenever the heart is acting under disadvantageous circumstances, Palpitation is never long absent. Thus any cause which, by pressure on the diaphragm, diminishes the space for the heart and impedes its beat, places the heart at a disadvantage, and Palpitation takes the place of the normal quiet contraction. The excessive use of tea is one of the common causes of irregularities of the heart's action in weak or nervous women; in some persons Palpitation follows tobacco-smoking, as it may also result from the adminis-

tration of other deleterious agents. In such cases, of course, a cure can only be expected after the discontinuance of the noxious substance.

In the following Table, abridged from Aitken, the chief characteristics of Palpitation from structural disease of the heart are placed in contrast with those from functional disorder.

TABLE OF THE CHIEF DIFFERENCES BETWEEN ORGANIC AND FUNCTIONAL DISEASE OF THE HEART.

ORGANIC.	FUNCTIONAL.
1.—Palpitation usually comes on slowly and insidiously.	1.—Palpitation generally sets in suddenly.
2.—Palpitation, or distressed action, though more marked at one time than another, is constant.	2.—Palpitation is not constant, having perfect intermissions.
3.—Percussion elicits increased extent and degree of dullness in the region of the heart.	3.—Dullness in the region of the heart is not extended beyond the natural limits.
4.—Lividity of the lips and cheeks, congested countenance, and Anasarca of the lower extremities, are often present.	4.—There is no lividity of the lips and cheeks, countenance often chlorotic, and, except in extreme cases, there is no Anasarca.
5.—The action of the heart is not necessarily quickened.	5.—The action of the heart is generally quickened.
6.—Palpitation often not much complained of by the patient, but occasionally attended with severe pain extending to the left shoulder and arm. (See "Angina Pectoris.")	6.—Palpitation much complained of by the patient, often with pain in the left side.
7.—Palpitation is increased by exercise stimulants, and tonics, but is relieved by rest.	7.—Palpitation is increased by sedentary occupations, but relieved by moderate exercise.
8.—Is more common in the male than the female.	8.—Is more common in the female than the male.

Treatment.—Leading Indications.—*Aconitum.*—Palpitation from the least excitement, with anxiety, chilliness, numbness of the extremities, or a sensation as if the heart ceased to beat; short, hurried breathing; hot, flushed face. It is specially adapted to plethoric patients.

Belladonna.—Oppression, tremor, pain about the heart; throbbing in the neck and head; redness of the face.

Digitalis. Great irregularity, without any assignable cause, with inability to walk or lie down; great distress. One to three drops of the strong tincture every two or three hours.

Pulsatilla. — Hysterical symptoms; and in females suffering from deranged period.

Administration. —During a sudden attack, a dose should be administered immediately, and repeated every thirty to sixty minutes; afterwards, thrice daily for a few days.

Accessory Measures. — The patient must avoid mental excitement, stimulants, coffee, sleeping-draughts, indigestible food, etc. Pure air; cold water, used internally and externally; regular, moderate exercise in the open air, short of inducing fatigue; a contented and tranquil disposition, with light and nourishing diet, are excellent auxiliaries in the treatment of this affection.

Intermittent Pulse.

This variety of irregularity of the heart's action requires a distinctive notice. By the term intermittency is meant an absolute loss of the normal beats of the pulse, covering the time of a natural stroke, or in extreme instances, of two, three, or even more pulsations, probably from temporary failure of the left ventricle of the heart. The pulsation following the intermission is heavier and fuller, showing that the ventricle is contracting on an extra volume of blood after the momentary pause, like a smith who, striking at the forge a number of strokes in regular succession, until tired of the action, changes it for a moment to give a more deliberate blow, and then rings on again in regular time.

Cause. - It is not supposed to be due to Indigestion or to any affection of the lungs, liver, kidneys, or other secreting or excreting organ, but to deficient nervous force.

Treatment.—Dig., Phos., Nux V., Ac. Phos., Acon., Bell., Spig.

Aneurism.

Definition.—A Tumor formed by the dilation of an artery, or communicating with an artery, and containing blood. In its

first stage the Tumor contains fluid blood, and pulsates; in its second stage, it contains coagulated blood, deposited in numerous thin layers, like the leaves of a book.

Aneurism may be idiopathic or traumatic: the latter is caused by an injury to the artery. The disease is more common in men than in women, and causes several hundred deaths in England annually.

Varieties.—The fusiform (spindle-shaped), sometimes called true Aneurism, consists of an unnatural dilation of an artery; succulated Aneurism is a partial dilation of all the coats of an artery; and diffused implies a sac formed by the surrounding tissues. The last variety has been mistaken for a purulent sac, and opened accordingly, to the imminent peril of the patient.

Treatment.—An Aneurism often requires surgical measures. Cases beyond the province of surgery are generally much benefited by Acon. or Ver.-Vir. They prevent arterial excitement, and remove all excuse for abstraction of blood.

Arnica.—This remedy may be alternated with Acon. in traumatic Aneurism.

Phosphorus.—Is useful in idiopathic cases to prevent further arterial degeneration.

Accessory Means.—Rest in a recumbent posture, and a light unstimulating diet, are favorable adjuncts to the treatment; indeed, the beneficial results of recumbency are most remarkable.

Phlebitis—Inflammation of the Veins.

Two varieties exist of this not very common disease:—

(*a*) *Adhesive*, generally arising from exposure to wet and cold, and affecting one of the large veins of the lower extremities.

(*b*) *Suppurative*, which is a more serious form, frequently an aggravation of the adhesive variety, and sometimes caused by a wound or abscess.

Phlegmasia dolens (Milk-leg or White-leg) is an Inflammation of the veins, peculiar to nursing women, presenting symptoms and requiring treatment similar to Phlebitis.

Symptoms.—If the affected vein is near the surface, it appears reddish-purple; it is hard, swollen, and knobbed; severe pains may dart through the limb, especially on movement, and there is

stiffness, with more or less œdema of the part. If Suppuration occur, it may be by means of an Abscess; or it may remain under the surface, producing purulent infection. Professional treatment is absolutely necessary for this form of the disease.

Epitome of Treatment.—Acon. (febrile disturbance); Ham. (with varices); Puls. (with disordered menstruation) Phos., Lach.

Accessory Measures.—Rest; fomentations of warm water; Aconite lotion if there be much pain; Hamamelis lotion if the veins are varicose. In acute cases the diet should be light and limited; when suppuration ensues it should be generous.

Varicose Veins.

Definition.—A condition in which the veins are dilated, so that their valves, which cannot undergo a corresponding enlargement, cease to be efficient.

The disease occurs most frequently in the superficial veins of the lower extremities, and not usually in deep-seated ones, because they are supported by the muscles and *fasciæ*. When the veins of the spermatic cord are involved, the disease is called Varicocele; when those of the anus, it constitutes a form of Piles.

Symptoms. The affected veins are dilated, tortuous, knotted, of a dull leaden or purplish-blue color, with much discoloration of the parts, and some œdema of the limb. If a great many small cutaneous veins are alone affected, they present the appearance of a close network. The enlarged veins and local swelling diminish after taking a horizontal posture.

Causes.—Generally, conditions which induce more or less permanent distention of the veins. Strains, or over-exertion of a part, may cause an afflux of blood into them and lead to their distention; standing occupations favor the gravitation of blood to the lower extremities; and further, the length of a vein, such as the internal saphena, may lead to its undue distention in consequence of the long column of blood it contains. Obstacles to the return of venous blood, such as tight garters or stays, a Tumor, the pregnant uterus, or even impacted fæces, by pressing upon one of the large venous trunks, may occasion its permanent distention as well as that of its branches. In other instances, Varices seem to be due to an hereditary predisposition, altered

condition of the blood, or deficiency of tone in the active organs of circulation, leading to an enfeebled and relaxed condition of the walls of the veins.

Consequences.—(1) Severe aching pain, with a sense of weight and fatigue, especially after long walking, or remaining for some time standing in one posture. (2) The vein may burst by injury, and occasion severe and dangerous Hæmorrhage. (3) Ulcers may arise from the imperfect circulation and nutrition of the skin, usually on the lower part of the outside of the leg. (4) They incapacitate for hard or long-continued work, being usually associated with constitutional debility.

Epitome of Treatment.—1. *Simple Varices.*—Ham., Puls., Sil., Ac.-Fluor.

2. *Associated with other disorders.*—Nux V. and Sulph., in alternation (Constipation, Piles, etc.); Ars. (debility, burning pains, varicose Ulcers of the legs, etc.); Ac.-Nit. (weakly and scrofulous patients); Acon. or Bell. (painful inflammatory symptoms); Apis (œdema, and erysipelatoid redness).

Hamamelis Virg., administered internally, and applied as a lotion externally—a compress covered with oil-silk, and a well-applied bandage—is often specific. *Lotion.*—One part of the strong tincture to six parts of water.

Accessory Means.—Moderate compression by accurately-fitting bandages or elastic stockings, so as to afford that support to the blood which the valves can no longer give, and to prevent increased distention. The pressure should be very gentle and uniform, and be applied in the morning, before the patient puts his feet to the floor, and be maintained until he retires to bed. Should only a small portion of a vein be enlarged, a piece of strapping-plaster may afford the requisite support. Prolonged exercise or standing should be abstained from, and, after taking moderate exercise, the limb should be raised, and maintained in a horizontal posture. Standing is more unfavorable than walking. The leg should be well washed, and rubbed quite dry, every morning.

Varicose Ulcers.—Their treatment is the same as that of ulcers generally, with the exception of the following directions: Should a Varix burst, excessive Hæmorrhage may suddenly take

place, inducing fainting, or even death. The patient should be immediately placed flat on the floor, and the leg raised, when the Hæmorrhage generally ceases. A compress and bandage should then be applied to prevent subsequent bleeding. Excoriations or tender spots about varicose veins should have early attention, to obviate the formation of ulcers.

Goitre.

Definition.—Enlargement of the thyroid gland, endemic in certain mountainous districts, but not limited to them.

The swelling is unattended with pain or danger, until it acquires a size sufficient to produce deformity, and, by its pressure upon the trachea and œseophagus, interferes with respiration and swallowing. Women are more subject to it than men, the proportion being about twelve to one, and the right lobe is more often enlarged than the left. It is most commonly met with in chalky districts and mountainous countries, and in the latter is often associated with Cretinism.

Causes.—The habitual use of water which percolates through magnesian limestone rocks or strata, and which holds in suspension the soluble salts of lime. A recent writer, Dr. J. B. Wilson, however, denies the influence of water as a cause, and attributes the swelling to laborious occupations in an unfavorable posture, and to the effects of elevation from the sea-level.

In some parts of England—Yorkshire, Derbyshire, Nottinghamshire, Hants, and Sussex—where the disease prevails, there is a ridge of magnesian limestone running from north to south through the centre of the district. All along that line Goitre prevails to its greatest extent; and, diverging to either side, the disease is found to diminish (*Inglis.*). In a Goitrous district in Switzerland, there are some waters issuing from certain rocks, and trickling along crevices in the mountains, the drinking of which will produce Goitre, or increase goitrous swellings, in eight or ten days, while the inhabitants who avoid these waters are free from the disease.

Goitre is generally enlarged during any derangement of the health, especially uterine; or by difficult labors, strains, twists of the neck, etc.

Treatment. — *Spongia.*—This remedy is recommended by Hahnemann for goitrous persons living in valleys; it is also suitable for children, and girls approaching puberty, who do not require Iod.

Iodium.—Inveterate, hard Goitre, affecting dark patients, and when there is an absence of other symptoms.

Mercurius Iod.—In cases of long standing, and when the tumor is enlarging in spite of the previous remedies, we have used Merc.-Iod. with excellent results.

Calcarea.—Goitre associated with Struma.

Lapis albus, in the hands of Dr. Grauvogl, has proved very effective.

K.-Hydriod., Brom., Nat.-Carb., Phos., and Sulph. have also been recommended,

The external application of the drug given internally we have found to greatly facilitate the cure. [Gunther's Goitre Powder, which may be had at any Homœopathic Pharmacy, will be found of great value in this disease.]

An entire removal of the swelling is not always possible; still, much is gained if the tumor is lessened, or its further enlargement prevented. Any impairment of the digestive or uterine functions should be corrected, for with such disorders a Bronchocele often attains inconvenient and even alarming proportions.

Auxiliary Measures. — The most essential point in the treatment is the removal of the patient from the district in which the affection occurs. The necessity for this may be inferred from the fact that persons taking up their residence in affected localities soon acquire Goitre, while others affected with Goitre soon lose it on leaving such localities. A dwelling on the coast and sea-bathing are advantageous, and then the remedies may be administered with greater hope of success.

Exophthalmic Bronchocele is an "enlargement, with vascular turgescence, of the thyroid gland, accompanied by protrusion of the eyeballs, Anæmia, and Palpitation."

Cause. — *Nervous Exhaustion.* — This may be induced in females by Leucorrhœa, Menorrhagia, etc., or by Hæmorrhoids in males.

Treatment.—This is simple, depending much on hygienic means, which may be assisted by such remedies as China (loss of animal fluids), Ferr. (Anœmia), Puls., Nux V. (gastric irritability), etc. The "Accessory Means" suggested for "Anæmia" are equally necessary here.

CHAPTER VIII.

DISEASES OF THE RESPIRATORY SYSTEM.

Hay-Asthma—Hay-Fever—Summer Catarrh.

Definition.—A specific disease, affecting predisposed persons only, and affecting them in the same way, and at about the same period, every, or nearly every year, and caused by the emanations from certain flowering plants, including the grasses. The term Hay-fever is not sufficiently inclusive, for the odors from hay, although sufficient in many cases, less frequently produce the affection than the various flowering plants.

Symptoms.—They are those of an ordinary Catarrh, to which those of Asthma are superadded. There are—itching of the forehead, nose, eyes, and ears; much general irritability and lassitude; sneezing; profuse discharge from the nose; tightness of the chest, dyspnœa, and Cough; pricking sensations in the throat, general depression, etc. Exposure to the emanations from powdered Ipecacuanha gives rise to similar symptoms in many persons.

Epitome of Treatment.—1. *When the Chest is chiefly Affected.*—Ipec., Ac.-Hydrocy., K. Bich., Ac.-Carbol.

2. *When the Nose, Eyes, and Throat.*—Ars. (much debility, with acrid discharge); Euphr. (profuse lachrymation); K.-Hydriod, Sabad.

3. *Prophylactics.*—Ars., Iod., K.-Bich.

Sabadilla.—Dr. Bayes recommends one drop of the tincture two or three times a day in water, and the administration of the drug by olfaction, several times daily; and he adds, "By this means I have cured many severe cases, and made numerous converts to our system."

Liq. Potassæ Arsenitis is recommended as a specific. We

have obtained excellent results in many cases from Ipec., Euphr., Merc., and Ars. In several, the disease has not recurred in subsequent years.

Inhalation.—The remedy used internally should also be administered by inhalation, either by simple olfaction, or, still better, in the form of vapor: this is produced by means of an ordinary perfume or spray producer. Inhalation should always be employed during an attack.

Accessory Means.—Removal to the coast, with a barren surrounding country, or to any part where flowering plants and grass do not grow, or hay is not stored, offers the surest protection. The symptoms are mitigated by protection from bright sunlight, and by such means as tend to promote the general circulation. Cold or tepid bathing, the cold shower-bath, and the Turkish bath are also recommended under different conditions. In one reported case, two or three minutes' swim in the sea removed the symptoms as if by magic. [The following localities and places of escape from the domain of pollen, are mentioned by Dr. Morril Wyman: The Glen, Gorham, Randolph, Jefferson, Whitefield, Bethlehem village, the White Mountain Notch, and the Twin Mountain House, in New Hampshire; Mount Mansfield, in Vermont; the Adirondacks; the Island of Mackinaw; the Lake Superior region; the Allegheny Mountains at Oakland, and the Iron Mountain. A certain immunity is experienced at Fire Island, and at Beach Haven on the Jersey coast. From this locality (Chicago), patients frequently go to places in Northern Michigan, Wisconsin, or Minnesota, during the hay-fever season.]

[**Palliative for Hay Fever.**—A writer in the New York *Sun* gives the following formulas as having relieved her sufferings from autumnal catarrh during six years past and proved similarly beneficial with others: Into a four ounce wide-mouthed vial, half filled with cotton, put the following mixture:

Carbolic acid	℥ iiss.
Ammonia water (sp. gr. 0.960)	℥ iij.
Distilled water	℥ v.
Alcohol	℥ viiss.

M. Keep the vial closed tightly as much as possible, and when used, inhale the fumes through the nostrils.]

Coryza—Catarrh—Cold in the Head; and Bronchial Catarrh.

The condition expressed under the above different terms is of very common occurrence, and often the precursor of very serious affections. It consists of inflammation of the mucous membrane of some portion of the air-passages. If the mucous membrane of the nose is affected, it is called Coryza; if the trachea and large bronchial tubes, Bronchial Catarrh.

Symptoms.—Coryza usually commences with lassitude, slight shiverings, weight in the head, sneezing, watery eyes, and obstruction of one or both nostrils, with a discharge of thin, colorless fluid. If it be a severe cold, the foregoing symptoms are soon followed by a dry Cough, Hoarseness, Sore throat, dryness, tenderness, and swelling of the nostrils, pains and soreness of the limbs, general weakness, more or less fever, quick pulse, thirst, loss of appetite, etc. Under a vigorous condition of the constitution, or as the result of judicious treatment, the symptoms soon subside. In other cases the complaint may assume the form of Bronchitis, Pneumonia, Quinsy, Erysipelas, Toothache, Neuralgia, or even excite Consumption in a predisposed person.

Causes.—Exposure to draughts of cold air; wet boots or clothing; insufficient clothing when the body is cooling after having been heated. Wet feet or wet clothes do not ordinarily result in a Cold if the individual changes his clothes for warm, dry ones, immediately after ceasing from active exercise, and avoids any further exposure. But if a person perspires, and then gets chilled, he will be very likely to take cold, and to exhibit some of its effects. It is not when the body is hot, but when it is cooling, that it is most susceptible. When the body has been heated or exhausted by exercise, the frame is not able to react, and then the application of cold increases the depression. Partial exposure to a cold atmosphere, as in a close carriage with the windows open, is more injurious than a general exposure; probably because the balance of the circulation is less disturbed in the latter case, and the lungs are better supplied with oxygen. Damp beds, prolonged bathing, passing from heated rooms to cold ones, or into the open air, give cold.

Treatment.—*Camphor.*—This remedy is suited to the chill or

cold stage, when its prompt administration, in two-drop doses, or two or three Camphor pills, repeated several times, every ten or twenty minutes, will often terminate the disease in the first stage. It should be chosen in preference to Acon., when the patient has still to be exposed to atmospheric changes. It is of little or no use except in the incipient stage.

Aconitum.—Commencement of a Cold, or in the precursory stages of diseases resulting from a cold, with feverishness. If promptly administered, it often obviates the necessity for any other medicine. A dose every second or third hour. If the Cold have advanced into any other disease, Acon. may be alternated with, or substituted by, some other remedy.

Bryonia.—For Bronchial Catarrh—"Cold on the chest"—with hard Cough, shaking the head, etc., and soreness of chest, Bry. is one of the best remedies, with or without Acon.

Gelsemium.—Watery discharge from the nose, soreness in the throat and chest, Cough and Hoarseness; early stage of acute Bronchitis, without the excitement calling for Acon.; catarrhal Ophthalmia.

Arsenicum. — Abundant discharge of thin, hot, excoriating mucus from the nostrils, with burning sensations; flow of tears; lassitude and prostration.

Pulsatilla.—Impaired taste and smell; thick fœtid discharge from the nose; heaviness and confusion in the head; aggravation of the symptoms in the evening or in a warm room; sharp pains in the ears and sides of the head, frequently changing from one place to another.

Mercurius.—Constant sneezing, with soreness of the nose; thick mucous discharge; alternate heat and shivering; profuse perspiration; Sore throat; aggravation of the symptoms towards evening. It is often useful in alternation with Nux V. If Merc. fail, Hep.-S. may be substituted.

Euphrasia.—Acrid fluent Coryza, with involvement of the lining membrane of the eyes, and profuse lachrymation.

Kali Bichromicum.—Chronic Catarrh, and chronic affections of the respiratory mucous membranes generally, with Hoarseness, tough, stringy sputa, chronically inflamed or ulcerated throat, Cough, etc. An additional indication is a concurrent affection of the digestive mucous membrane—yellow-coated tongue, etc.

Bapt. (with feverish Cough); Nux V. ("stuffy Cold"); Ipec. or Cact. (rattling of mucus); Cimic. (chronic); Rumex (sensitiveness to cold air); Cham. (infants and young children); Dulc. (often preventive or curative of Cold from damp).

Accessory Means.—The hot foot-bath at bed-time, and warm gruel when in bed. When the directions are promptly and efficiently carried out, Cold may generally be arrested in its incipient stage. When the Catarrh is established, the most essential measure to insure a rapid recovery is to avoid exposure to atmospheric vicissitudes until the attack has passed away. In serious cases the patient should remain in bed for two or three days. As a rule, light food, and a very sparing use of meat, should be adopted at the commencement of a cold. Young infants should be fed with milk by means of a spoon, and simple cerate, cold cream, or tallow applied to the nostrils.

To Diminish Excessive Sensibility to Cold.—Extremely sensitive persons should consult a homœopathic physician, who will be able to prescribe both hygienic and medicinal measures suitable to individual cases. The two following measures are, however, recommended for general adoption. 1.—Free exposure to the open air, daily. Familiarity with the atmosphere has a wonderful influence in diminishing the sensibility of the skin, and enabling the body to resist the invasion of cold. 2.—The morning tepid bath. Tepid-sponging over the entire surface of the body is an invaluable method of protecting the body against injury from exposure to changes of temperature.

Aphonia—Loss of Voice—Hoarseness.

Definition.—Aphonia is a temporary or permanent paralysis of the muscles which approximate the vocal cords in the production of sounds.

Causes.—Acute or sub-acute inflammatory condition of the mucous lining of the larynx and trachea, a frequent accompaniment of a common Cold. Hysteria or debility is a cause of simple Aphonia. Aphonia from the pressure of an Aneurism or glandular Tumor is also accompanied by marked dyspnœa. It is rather a symptom than a disease *per se*.

Symptoms.—The voice is hoarse and husky, at times almost

or entirely inaudible; there is tickling, dryness, or irritation and perhaps soreness in the throat; with a short, dry Cough.

Epitome of Treatment.—1. *Simple Hoarseness.*—Phyto. (also complete or chronic loss of voice); Hep.-S (wheezing); Phos. (Paralysis of the vocal cords); Carbo V. (chronic).

2. *With Cold in the Head or Chest.*—Acon., Caust., Merc., Bry., Spong., Phos., Dulc.

3. *From Over-exertion of the Voice—Clergymen, Singers,* etc.—Phyto., Caust., Arn., Bary.-C., K.-Bich., Bell.

In some cases the Sulphurous Acid spray may be effectually employed. The throat and neck should be often bathed with cold water, as a preventive. Electricity is also of use.

Bronchitis.

[*a*] Acute Bronchitis is acute Inflammation of the mucous membrane of the bronchi—the air-tubes of the lungs. It may affect either the large or the small bronchi; and the smaller the tubes in which the inflammation exists, the greater the danger. Bronchitis is most common in elderly persons, although it is not infrequent in children.

Symptoms.—At first there is fever, with headache, lassitude, anxiety, Hoarseness, Cough, heat, and soreness of the chest, and other symptoms of a common Cold. The mucous secretion is at first arrested, but afterwards increased in quantity. There is a sense of tightness or constriction in the chest, especially of the upper front part; oppressed, hurried, anxious, labored breathing, with wheezing, severe Cough, which is at first dry, but is afterwards accompanied with viscid and frothy expectoration, sometimes streaked with blood; the breathing-sounds are accompanied by dry or moist rales; subsequently the sputa becomes thick, yellowish, and purulent, but never rusty-colored as in Pneumonia, although it is frequently streaked with blood. The pulse is frequent and often weak; the temperature of the body is always raised, in severe cases as high as 105 deg.; there is throbbing in the forehead and aching in the eyes, aggravated on coughing; the tongue is foul; the urine is scanty and high-colored; with other febrile symptoms. In favorable cases the disease begins to decline between the fourth and eighth days,

when the breathing becomes easier, and the expectoration thicker, less frothy and stringy; and the complaint soon entirely disappears, or assumes the chronic form.

In cases about to terminate fatally, the skin becomes covered with cold perspiration; the cheeks and lips are pale and livid; the extremities cold; there is rattling and a sense of suffocation, the breathing being nearly suspended by the morbid secretion which chokes up the bronchial tubes and their ramifications, and which the patient has no longer power to cough up; at length extreme prostration and complete insensibility end in death.

Morbid Anatomy.—On a *post-mortem* examination, we find the trachea, the bronchi, and their divisions and subdivisions, completely blocked up by a frothy, adhesive mucus, resembling that which had been expectorated during life.

[*b*] **Chronic Bronchitis** is a somewhat different disease, very common in advanced life. In mild cases there is only habitual Cough, shortness of breath, and copious expectoration, and entire absence of Pyrexia. Many cases of winter cough in old persons are examples of chronic Bronchitis. It is often insidious in its approach, although it sometimes succeeds to acute Bronchitis, when that disease has been neglected or badly treated.

Causes.—Similar to those of common Cold:—exposure to cold draughts of air, to keen and cutting winds, sudden changes of temperature, scanty clothing, or undue exposure of the throat after public speaking and singing. There are certain "social indiscretions" which are fertile causes. Among these are the habits of our business men, "who, after a hurried early breakfast, hasten to catch the train to the city, where they work all day on little or no food, and start on the homeward journey in the evening with the vital powers depressed, and in a condition most favorable to the inroad of disease. Ladies are also 'indiscreet' in exposing themselves to draughts of cold air in the thinnest and scantiest clothing, in halls or passages, or even in the open street on the way between a crowded room and their carriage. Thin shoes, and too late resort to winter habiliments, are also sources of danger; as is also inattention to the fact that those advanced in years require warmer clothing than the middle-aged."

Winter Cough, often regarded with indifference, is, in many

cases, but a precursor or symptom of this common disease. "When an epidemic of Cholera sweeps away its hundreds, public attention is attracted, and fear induces attention to precautions hitherto despised. Bronchitis sweeps away its thousands annually, and is surely deserving of more general attention than is ordinarily given to a 'winter Cough.'"

Treatment — Leading Indications.—*Aconitum.*— Should commence the treatment of all cases with the usual febrile symptoms. If administered early and frequently it will materially shorten the attack, and perhaps be alone curative. A short, hard Cough, excited by tickling sensations in the windpipe and chest, inducing frontal Headache; and burning and sore pain in the chest, are also indications.

Bryonia. –Violent Cough, chiefly affecting the upper part of the chest, under the breast-bone, with copious expectoration of thick yellow mucus, sometimes blood-streaked. In advanced stages this remedy is often valuable in alternation with Phosphorus. Bry. is also useful in the acute attacks of children with suffocative Cough, great agitation and anxiety.

Kali Bich.—Bronchitis, with irritation in the larynx and chest, inducing severe and long-continued paroxysms of Cough, with tenacious and stringy phlegm. A yellow-coated tongue, and loss of appetite, are also indications. It is very useful when Catarrh runs on into Bronchitis, and chronic Bronchitis, with the above symptoms.

Antimonium Tart. — Paroxysms of suffocative Cough with loose expectoration, wheezing respiration; the whole chest seems to be involved; frequently also there is Palpitation, pain in the loins and back, Headache, thirst, etc. In chronic Bronchitis it is often useful in promoting expectoration.

Ipecacuanha.—Spasmodic Cough, with or without expectoration of blood, often with sickness, and great difficulty of breathing; also as an expectorant.

Phosphorus. — Chronic cases, and whenever the lungs are involved, or there is inability to remove the phlegm.

Arsenicum.—Chilliness in the chest; a suffocative sensation on lying down; anxious, labored breathing; or when the lungs do not permit the fresh entrance of oxygen into the air-tubes, and

thus are incapable of expelling the morbid secretions. Ars. is well indicated in the aged or feeble.

Ars.-Iod.—Frequent Cough, with muco-purulent or stringy expectoration, often aggravated on exertion, and at night; dyspnœa on exertion; asthmatic sensations, compelling the patient to sit up in bed to breathe; slight night-sweats.

Carbo.-Veg.—Chronic Bronchitis in the aged; profuse expectoration, or profuse mucous accumulation, which the patient is unable to remove; blueness of the nails, coldness of the extremities, and loss of voice. Solania is useful in similar cases.

China.—Useful in sustaining the constitution under the heavy discharge of mucus. It may be administered alone or in alternation with another remedy.

Administration.—In acute cases, a dose every two to four hours; in chronic, thrice daily.

Kreasote Inhalations.—In chronic Bronchitis, with excessive expectoration, the inhalations of the vapor of Kreasote—three or four drops in a pint of boiling water—checks the secretion. It also corrects the fœtid sputa.

See also Section on "Cough."

Accessory Means.—In acute Bronchitis the diet should be light and liquid, including gum-water, barley-water, gruel, jelly, beef-tea, etc. Free sweating should be induced by frequent draughts of water and a couple of extra blankets. The air of the patient's apartment should be maintained at a temperature of about 65 to 70 deg. Fahr., and be kept moist by the evaporation of hot water from shallow dishes near the bed; but proper ventilation should also be preserved. Congestion of the lungs may be relieved by covering the chest with large hot linseed-meal poultices. If there is great prostration, nutritious liquid diet and stimulants are necessary; if they cannot be taken by the mouth, they should be administered in the form of enemata.

Preventive Means.—The first and most important is, tepid bathing in the morning, that particular form of bath being adopted which is most useful or convenient. Susceptible patients may wear a good respirator whenever exposed to night air, or during inclement weather; but such exposure should be avoided as much as possible. Keeping the mouth shut, and breathing

through the nose only, on exposure to cold air, often answers as well as a respirator.

Another preventive in the case of males is the beard, which protects the respiratory passages against the effects of sudden changes of temperature. In many instances the beard would protect clergymen, lawyers, and other public speakers, as well as singers, from the injurious effects of sudden variations of the atmosphere, from which professional men often suffer.

Asthma.

Definition.—Asthma is a spasmodic disease, characterized by paroxysms of difficult breathing, with great wheezing, and a dreadful sense of constriction across the chest; each paroxysm terminates by the expectoration of a more or less abundant quantity of mucus.

Symptoms.—A paroxysm generally occurs in the night, particularly from midnight to early morning; the patient wakes suddenly with a sense of suffocation, springs up in bed, and assumes various postures; or he even rushes to the open window, where he leans forward on his arms, employing all the muscles of the neck, back, and chest to assist respiration; and, wheezing loudly, from the great obstruction to the entrance and exit of air, labors for breath like one struggling for life. The countenance bears evidence of great distress; the eyes protrude; the skin is cold and clammy, the pulse small and feeble; the perspiration stands in large drops on the forehead, or runs down the face; and he often looks imploringly, sometimes impatiently, at his medical attendant for relief from his misery. At length, after an uncertain time, one to three hours or longer, there comes a remission; cough ensues, with expectoration of mucus, and the paroxysm ceases, permitting the sufferer to fall into the long-desired slumber.

The attacks are unattended with fever, but are generally preceded by some disturbance of the digestive organs. They are often periodic and sudden, and attended with distressing anxiety.

Physical Signs.—On percussion during a fit, the chest is resonant, showing that the lungs are distended with air; but on applying the stethoscope little or no respiratory sound is heard,

as if the air were imprisoned or in a state of stagnation in the air-cells; and it is probable there is a spasmodic contraction of the muscular fibres of the air-passages which stops or modifies the respiratory murmur.

Diagnosis.—The physical conditions of the chest just pointed out, the abruptness and violence of the symptoms, and the comparative good health enjoyed between the attacks, are sufficient to distinguish the disease.

Causes.—Irritation of the nerves of respiration resulting in most cases from deranged digestion, from the intimate nervous connection existing between the digestive and the respiratory organs; it may also be produced by changes of the atmosphere, or by the introduction of some poisonous but subtile material floating in the atmosphere, and brought by inspiration into contact with the respiratory surface, such as the minute particles, or the mere odor, which passes off from powdered ipecacuanha or hay; the vapor of sulphurous acid gas, or chlorine. Asthma is often associated with the gouty or rheumatic diathesis. Excessive exertion and mental emotion frequently bring on a paroxysm. After it has once occurred, Asthma is easily reproduced in Indigestion, especially after late dinners or suppers. A frequent repetition of the fits leads to a dilated state of the air-passages and air-cells of the lungs (*Emphysema*), dilation of the right cavities of the heart, and the general displacement of that organ which uniformly exists in persons who have long suffered from this disease. The disease may also be hereditary.

Treatment. — Leading Indications. — *Ipecacuanha.* — A tight sensation in the chest, panting and rattling in the windpipe, which feels as if full of phlegm; coldness, paleness, anxiety, and sickness; troublesome Cough. A dose every ten or fifteen minutes during an attack; afterwards, every three or four hours.

Aconitum.—The striking power of this great remedy in affections of the pneumogastric nerve characterized by imperfect and labored breathing, has suggested its use in spasmodic Asthma, during the paroxysms of which we have often administered it with marked and speedy relief. It is especially indicated by oppressive anxiety, dyspnœa, and labored action of the heart.

Lobelia Inflata.—Pure nervous Asthma, with a constrictive,

suffocative sensation; spasmodic Cough; Vomiting; giddiness, etc. *Baptisia;* for similar symptoms.

Cuprum.—Also useful in attacks of nervous Asthma.

Nux Vomica.—Probably the best anti-Asthma remedy. It is homœopathic to that condition of the digestive system which is the most common cause of the irritation which results in bronchial Spasm. Again, "after the paroxysm subsides, it leaves a condition of the digestive organs for which Nux Vomica is the great remedy. The tongue is coated with a thick yellow fur; there is often slight nausea, flatulence, and constipation. Besides, the breathing is seldom quite right; generally there remains a sort of physical memory of the struggle. The patient feels that no liberties must be taken, either of diet or exercise. Out of this secondary state of bondage nothing will liberate so effectually as Nux Vomica." (*Russell*).

Arsenicum.—Short, anxious, wheezing breathing; aggravation of the sufferings on lying down, and upon the least movement; periodic, suffocative attacks, with pale or bluish face. It is especially useful in the aged and feeble, and in chronic Asthma, with burning heat in the chest, cold sweats, and prostration; also when complicated with Heart-disease, or following Bronchitis or Catarrh.

Veratrum. — Violent paroxysms of spasmodic Asthma, with coldness of the nose, ears, and feet, cold perspirations, and great prostration.

Sulphur.—Chronic Asthma apparently connected with Gout, skin eruptions, or some other constitutional taint; also after other medicines have but partially succeeded.

Ant.-T., K.-Hydriod, Eup.-Perf., Rumex, and Bell. should be noted.

Accessory Means.—During a fit, striking relief may often be obtained by putting the feet and hands into hot water. Smoking stramonium at the commencement of a fit removes it like a charm in some: in others, however, it fails altogether; the inhalation of Aconite vapor is much more certain and efficacious; also of Sulphur, Turpentine, or common Salt, either inhaled from hot water, or by spray-producer. Coffee, as strong as it can be made, and as hot as it can be taken, without milk or sugar, is sometimes

palliative. Holding the breath as long as possible helps to relax the Spasm. In obstinate cases inhalation of Chloroform may be employed to relax the contracted muscular fibres. Tobacco-smoking, and other such measures, are of no ultimate utility, and are, moreover, rendered unnecessary by homœopathic treatment. Relief is often obtained by the fumes of burning Nitre on a plate, which is done by placing some pieces of blotting-paper, about the size of the hand, previously saturated in a solution of the nitrate of potash; one of these pieces being ignited, the fumes are diffused throughout the room, and their influence is soon made evident. At the same time ventilation must not be neglected; the windows should be regularly thrown wide open to renew the air of the apartment.

Preventive Measures. — Persons predisposed to Asthma should strictly avoid all its exciting causes, especially indigestible food and heavy suppers; wet feet, damp clothes, and sudden changes of temperature. The inclination to stooping should be corrected, and the shape and capacity of the chest improved by a systematic course of drilling. The "plan of dietary" sketched in Part VI. of this volume should be adhered to; for the slightest disorder of the stomach may occasion an attack. Pastry, highly-seasoned dishes, too great a variety or too great a quantity at one meal, coffee, and heating beverages, should be avoided. "More is to be done for asthmatic patients on the side of the stomach than in any other direction." In some cases the diet should be weighed, the hours of meals fixed, and rigidly adhered to. An important point is to take the last solid meal at such an hour as shall allow time for its complete digestion before retiring to bed. Although suppers are generally injurious, a cup of bread-and-milk or a small sandwich is acceptable in the evening, and is by no means hurtful to an asthmatic patient desiring food at that time.

Out-of-door exercise, walking or riding, is also useful; but it should not be taken within one or two hours after a meal, or to such an extent as to occasion fatigue. [In difficult cases when every other means fail a residence in Colorado will effect a cure.]

Pneumonia—Inflammation of the Lungs.

Definition.—Acute Inflammation of the true lung-tissue, in contradistinction to that which affects the air-tubes of the lungs

(Bronchitis), and that of the investing membrane of the lungs (Pleurisy); the febrile symptoms are severe, appear very rapidly, and, in favorable cases, as rapidly disappear between the fifth and tenth days, while the products of the Inflammation still remain.

If one lung only be involved, it is termed single Pneumonia; if both, double. The latter occurs in about one out of every eight cases; in the single variety two cases out of every three are Pneumonia of the right lung. The portions chiefly involved are the lower posterior and the base of the lung. The disease frequently co-exists with Pleurisy, when, if Pneumonia forms the chief disease, the double affection is called Pleuro-pneumonia. If, however, Pleurisy predominates, it is termed Pneumo-pleuritis.

Symptoms.—Pneumonia generally comes on insidiously, with restlessness and febrile disturbance, and sometimes has made great progress before the true character of the disease has been discovered. There is deep-seated, dull pain, referred to the scapulæ, or felt as an oppression under the sternum; a great feeling of illness; frequent, short cough, with expectoration of viscid matter of a green, yellow, or pale color, sometimes tinged with blood, which forms such tenacious masses that inversion of the vessel containing them will not detach them. Profuse green expectoration is a serious symptom. The breathing is hurried and difficult; the skin hot, especially in the regions of the ribs and armpits; there is no moisture in the nostrils, which "flap," and the eyes are tearless; there exists great thirst; interrupted, hesitating speech; the pulse is variable, being sometimes rapid and full, at other times hard and wiry, or quick and weak; the urine is scanty, red, and sometimes scalding; and the patient lies either on the affected side or on his back. If the disease is unchecked, the face often exhibits patches of redness and lividity; the blood-vessels of the neck become swollen and turgid; the pulse weak, irregular, or thready; and the patient may sink, either from exhaustion or from obstruction of the lungs.

Physical Signs.—On percussing the chest of a person in health, a hollow resonant sound is returned, proving the presence of air. If we apply a stethoscope to the chest, we hear, as the patient breathes, certain sounds produced by the air entering the

air-cells,—"the vesicular murmur." In Pneumonia these sounds become changed; there is dullness on percussion; and in the first stage, by auscultation, minute crepitation may be heard, which has been compared to the sound produced by rubbing a lock of hair between the finger and thumb close to the ear. In the next stage the sound just described cannot be heard, for as the Inflammation proceeds, the soft and spongy character of the lung is lost, as it becomes consolidated by organization of the effused fibrine in the air-cells, and resembles the cut surface of the liver; this condition is called Hepatization. Percussion elicits great dullness over the whole of the affected part. During convalescence, as the air-cells open, minute crepitation may be again heard, and afterwards the natural vesicular murmur.

In persons having a low vitality, purulent infiltration may occur, which consists of diffused suppuration of the lung-tissue. In rare cases a circumscribed Abscess forms, and on applying the ear to that part of the chest a gurgling sound may be heard; this condition is usually preceded by rigors; and a hollow or cavernous sound follows when the Abscess has been emptied by coughing and expectoration. The occurrence of copious expectoration of whitish or yellowish mucus, general perspiration, a sudden abundant discharge of urine with copious sediment, Diarrhœa, or even bleeding of the nose, may be regarded as forming a crisis, encouraging the hope of a favorable termination.

Occasionally, in old or enfeebled constitutions, Gangrene of a portion of the lung may occur. This condition is easily recognized by a most intolerable odor of the patient's breath, resembling that proceding from mortification of external parts. Unless the gangrenous portion is extremely limited, the case is almost certain to terminate fatally.

Causes.—Severe or long-continued exertion, or over-fatigue, either alone or combined with cold. Brief exposure to cold, however intense, is rarely sufficient to excite this Inflammation; it is rather a prolonged and deep-reaching cause of cold that can produce this effect. "Thus," writes Dr. C. J. B. Williams, "if a person gets thoroughly wet, and remains long in wet clothes, or lies out on damp ground, or a sentinel standing or slowly pacing for hours in a cold wind, the chill goes to the heart, as it were,

and paralyzes the deep circulation, and Pneumonia is likely to be the result. Boys who get heated at football, or some other violent exercise, throw themselves on the damp grass, or remove clothing to cool themselves, or stand about; the chill operating on the exhausted body causes extreme Congestion in the lungs, the circulation of which has been weakened by the previous violent respiratory efforts. The result is Pneumonia, generally asthenic, commonly double, and attended with much prostration."

Epitome of Treatment.—1. *At the onset.*—Acon. in alternation with Phos. In previously healthy patients, and in uncomplicated cases, these two medicines are generally sufficient.

2. *Pleuritic complication.*—Bry., in alternation with Phos.

3. *Bronchial complication.*—Ant.-T., alt. Phos.

Other conditions.—Chel. (liver complications); Ars. or Ac.-Nit. (aged persons or feeble constitutions); Iod. (scrofulous patients); Sulph. (tedious, or sub-acute); Rhus, Ars., or Bapt. (enteric symptoms); Carbo V., Ars., or Lach. (foul breath, Gangrene, etc.); Cact. (Congestion in the chest); Ver.-Vir. (also cerebro-spinal irritation); Arn. (from injury, or over-exertion); Lyc. (deep-seated pain, or bronchial irritation left after Pneumonia).

Accessory Means.—The patient should be warmly but lightly covered; the temperature of the apartment 65 deg. to 70 deg. A large, thick linseed-meal poultice, to fit the chest in front and back. A continuous poultice is one of the best methods of providing for the local loss of vitality in Pneumonia and similar diseases. Niemeyer says, "In all cases I cover the chest of the patient, and the affected side in particular, with cloths which have been dipped in cold water and well wrung out. The compresses must be removed every five minutes, unpleasant as this procedure is in all cases, yet even after a few hours the patients assure me they feel a material relief. The pain, dyspnœa, and often the frequency of the pulse, is reduced. Sometimes the temperature goes down an entire degree." The patients must be kept very quiet, have mucilaginous drinks and farinaceous diet.

Pleurisy.

Definition.—Acute Inflammation of the pleura (the serous membrane which invests the lungs and lines the thorax).

In health, the pleura has a smooth, lubricated surface, to permit the free motion of the viscera it encloses; Inflammation destroys this polished surface, so that movement of the membranes, or of the lungs, is rendered difficult and painful.

Pleurodynia (false Pleurisy) is pain in the chest-walls, and does not belong to the pleuræ, or lungs.

Symptoms.—The disease comes on suddenly and violently, with rigors, fever, and lancinating, stabbing pains, often called "stitches in the side," commonly felt below the nipple, and usually affecting only one side; the pains are acutely increased by coughing, by pressure, or by the least attempt at a deeper inspiration, which the patient soon refuses to take. There is tenderness at the intercostal spaces, and the breathing is diaphragmatic, the movements of the ribs being restrained, and the lungs only partially filled with air. There are also a short, frequent, dry cough; parched tongue; flushed face; hard, wiry, quick pulse (about 100 in a minute); scanty, high-colored urine; and the patient constantly desires to lie on the affected side, or on the back. Should the lung also be involved, the expectoration will be very copious, and streaked with blood.

The Inflammation, however, soon terminates either in resolution, when the two surfaces of the pleura regain their smooth moist character; or the roughened and inflamed surfaces become more or less adherent; or effusion takes place, and a dropsical fluid separates the surfaces, a condition known as Hydrothorax. In severe cases the effusion may be so excessive as to compress the lungs and heart, and to suspend their functions. Sometimes there is a large collection of true pus, which fills the pleuritic cavity, when it is termed Empyema. This condition is likely to arise in bad constitutions, and also when the Inflammation has resulted from injury, or the presence of foreign matter in the cavity. The quantity of effusion may be estimated by the dyspnœa with which the patient suffers being greater in proportion as the lung is more completely compressed, as also by the extent of the dullness on percussion.

Physical Signs.—On applying the stethoscope to the affected part of the chest at an early period, the dry inflamed surfaces may be heard rubbing against each other and producing a friction-

sound; this rubbing may also be felt by placing the hand on the corresponding part of the chest: it is probably due to the pleura being preternaturally dry by exhalation, or to its being roughened by effusion of fibrine. This sound is only to be heard for a short time, because the opposite surfaces become glued together, or, more probably, separated by serous effusion; in this there is dullness on percussion at the lower part of the chest, as high as the level of the fluid. To the same extent the respiratory murmur is also lost. Ægophony may also be heard there occasionally. At the same time the patient, though at first he preferred to lie on the sound side, is compelled to turn to that which is affected, so that the movements of the healthy lung may not be impeded by the superincumbent weight of the dropsical pleura.

Causes.—Exposure to atmospheric vicissitudes, and sudden checking of the perspiration, are the most frequent causes, especially in persons of unhealthy constitutions: surgical operations and mechanical injuries are frequently exciting causes; thus the rough ends of a fractured rib may set up Inflammation of the pleura. It may also be excited by extension of other diseases. The cause of the disease may materially alter the treatment.

Treatment.—*Aconitum.*—In the early stage of the disease. After two or three doses, its beneficial effects are often marked by perspiration, which contrasts most favorably with the hot dry skin, urgent thirst, quick pulse, and general suspension of the secretory functions which previously existed.

Bryonia.—This is a remedy of great power in Pleurisy (as in all other Inflammations of serous membranes), even in its most violent forms. Its special indications are—stinging, shooting, or burning pains in the side, aggravated by breathing or movement; painful, dry Cough, or Cough with expectoration of glairy sputa; labored, short, anxious, and rapid respirations, performed almost entirely by the abdominal muscles; weariness, disposition to retain the recumbent posture; irritability, restlessness, etc. A dose every one to three hours, alone, or in alternation with Acon.

Arsenicum.—Tedious cases; when much effusion has taken place, evidenced by painful, oppressed breathing, occasional attacks of suffocation, etc.; coldness of the body, exhaustion.

Iodium.—Scrofulous patients, in whom the disease is protracted. Even when effusion has occurred, Iod., in alternation with Acon. or Bry., is still the best remedy for the strumous.

Phosphorus.—If the lungs are affected (Pleuro-pneumonia); also in persons of weakly constitution, sensitive lungs, and predisposition to Consumption. The expectoration is rusty-colored, and there is much prostration.

Antimonium Tart.—Cough, with rattling of mucus, oppressed breathing, sometimes nausea, profuse expectoration, violent throbbings of the heart, and a sense of suffocation.

Arnica.—Pleurisy supervening upon long-continued and laborious exercise, or from external injury; especially when pain and soreness remain, or when much fluid has been effused: in the latter case, Arn. tends to promote its absorption.

Sulphur.—When the lancinating pains in the chest have subsided, Sulphur will often complete the cure. It is also advantageous as an intercurrent remedy when recovery is slow, and when the breath and expectoration are fœtid.

Ac-Tannic.—Spontaneous and profuse evacuation of pus.

Accessory Measures.—Application of heat, in the form of poultices, flannel wrung out of hot water, etc., applied to the painful part, will often afford immediate relief. Dr. Roberts treats Pleurisy both before and after effusion by strapping the affected side firmly with broad pieces of common plaster, placed obliquely to the direction of the ribs, so as to secure rest. Many cases, it is said, have been cured very quickly simply by this means.

Bleeding in every form should be avoided. Perfect quiet with a semi-recumbent posture should be secured. The diet should be light,—gruel, arrowroot, broth; frequent sips of cold water will allay thirst. In case of effusion into the pleura the diet should be dry.

Cough.

Like Hoarseness, Cough is rather a symptom of disease than a disease *per se.* It is often the forerunner or attendant of some of the most fatal diseases of our climate, and should, therefore, never be neglected. There are many varieties of Cough, but we

here only give a list of the remedies in most frequent use, adding the leading characteristic symptoms of each. Cases that persist, in spite of one or more of the annexed remedies, should be regarded as of too constitutional a nature to be treated merely by the aid of books.

Treatment.—*Aconitum.*—A dry, hard, recent Cough, with restlessness, flushed face, Headache, thirst, burning dryness in the throat, scanty urine, confined bowels, etc.

Belladonna.—Short, dry, hollow, convulsive Cough, generally worse at night, in bed, better from cold, excited by a sensation of tickling in the throat, and accompanied by flushed face, Headache, and other symptoms of Congestion of the head.

Hyoscyamus.—Nervous, dry, spasmodic Cough, affecting old persons, also children and hysterical women, worse at night, and especially on lying down.

Bryonia.—A hard, dry, shaking Cough, worse in the day-time, attended with pain in the side, chest, and head; Cough aggravated by passing from warm air to cold, or *vice versa;* loose Cough, with white or yellow expectoration, sometimes streaked with blood; nausea and vomiting.

Ipecacuanha.—Irritating, nervous, and spasmodic Cough, with nausea or vomiting; the early stage of Whooping-cough.

Spongia.—Dry, barking, or whistling, laryngeal Cough, with tickling; Hoarseness, and loss of voice.

Hepar Sulphur.—Irritating Cough, with Hoarseness and smarting in the throat, excited or aggravated by exposure to cold or atmospheric changes; Cough with chronic Indigestion.

Ac.-Nit.—Chronic Cough; non-phthisical dry Cough, also when active non-tubercular phthisic has subsided; long-standing, short, dry, teasing, laryngeal Cough without expectoration.

Drosera.—Nervous, sympathetic, spasmodic Cough, worse at night, with retching or vomiting, and sometimes blood-streaked sputa. Patient perspires on waking. The best remedy after Acon. in uncomplicated Whooping-cough.

Phosphorus.—Dry Cough, excited by tickling in the throat; Hoarseness, and pains or soreness in the chest, with rust colored, bloody, salty, or purulent expectoration; phthisical Cough. Talking, laughing, eating, or moving, causes aggravation.

Mercurius.—Chronic, moist Cough, worse at night, with purulent or muco-purulent sputa.

Carbo Vegetablis.—Cough on taking the least cold; obstinate Hoarseness or loss of voice.

Kali Bich.—Cough, with tough, stringy expectoration, preceded by much wheezing, accompanied with difficult breathing, and followed by dizziness.

Chamomilla. — Cough of children during teething, with wheezing breathing, fretfulness, etc.

Sulphur.—Obstinate dry Cough, with tightness in the chest, and retching; loose Cough, with expectoration of whitish or yellowish mucus during the day, and dry Cough at night, attended with Headache, Spitting of blood, etc.

Beverages.—Gum-water, barley-water, linseed-tea, and other mucilaginous drinks; or, if preferred, small quantities of cold water, at frequent intervals.

Preventives.—Bathing or sponging the whole surface of the body every morning, as directed under Bathing. Clothing adapted to the varying conditions of the atmosphere. Exercise every day in the open air, if possible in the country. Familiarity with a free atmosphere affords a security against excessive sensibility to variations of the weather. Morning air is best; damp, confined air, or that of crowded assemblies, should be avoided.

CHAPTER IX.

DISEASES OF THE DIGESTIVE SYSTEM.

Stomatitis—Inflammation of the Mouth.

Symptoms.—Patches of redness on the lining of the mouth, which are sore, and from which an exudation takes place.

Causes. — Exposure of badly-nourished children to cold; gastric derangement; Measles or other eruptive fevers; or the introduction of hot and acrid substances into the mouth.

Treatment.—*Kali Chloratum.*—Fœtid breath, great soreness,

and Ulceration of the mucous surfaces of the tongue, palate, and cheek. We generally administer the 1x trituration. This remedy may also be used as a wash for the mouth; eight grains of the Chlorate of Potash to four ounces of water.

Mercurius.—Abundant salivation; swelling of glands.

Ac.-Nit. 1x.—When concurrent with portal Congestion, and the ordinary symptoms of biliousness.

China.—To invigorate the patient when the Ulcerations are healed.

Tannic Acid Gargle.—If used early, the affection is often immediately suppressed by a wash of Ac.-Tannic (one ounce to eight ounces of water). The Sulphurous Acid Spray, with the administration of Sulph. and Hep.-S., has rendered important service.

Accessory Means. — The cause should, if possible, be removed, amd if stomachic, the diet corrected. As a rule, the patient's diet should be restricted for some time to milk, or milk and soda-water, in equal proportions, which is both nourishing and digestible, and may be taken without adding to the patient's discomforts. Afterwards chocolate or cocoa may be gradually substituted, and continuously used instead of tea for the morning or evening meal. Good animal broths are also generally required as the disease declines.

Offensive Breath.

In perfect health, the odor of the breath is sweet and agreeable; on the contrary, fœtid breath is usually a concomitant of disordered digestion, Scurvy, malignant Sore throat, etc.; it is also disagreeable and infectious during the progress of the eruptive, enteric, and pestilential fevers; but in no disease is it more offensive than in Gangrene of the lung; indeed, that condition may be recognized by this symptom alone. Sometimes offensive breath arises from neglect of cleansing the mouth and teeth after meals.

Treatment.—*Carbo Veg.*—Putrid odor of the breath from decayed teeth, bad condition of the gums, large doses of Mercury, or other causes. A dose thrice daily, for eight or ten days, or as long as may be necessary. Hep.-S. or Ac.-Nit. may follow,

especially when Carbo. V. is insufficient, and when the fœtor results from previous mercurial Salivation.

Spigelia.—Offensive breath, perceived only by others, with much white or yellow mucus in the mouth and throat; the back part of the tongue is painful, and feels swollen.

Mercurius.—Fœtid breath from a Sore or aphthous mouth.

Nux Vom. or Puls.—From Indigestion.

Aur. or Puls.—In females advancing towards puberty.

Sulphur, morning and night for a week, may follow any of the preceding remedies, and complete the course.

Accessory Means.—General attention should be given to diet, the use of water, pure air, regular out-of-door exercise, bathing, and such other hygienic means as are indicated in the first chapter of this work. Animal food should only be eaten in moderation; and the teeth and mouth should be carefully cleansed at least twice a day. Perfumed Carbolic Acid, diluted with water, makes an excellent wash for the mouth for patients troubled with fœtid breath.

Toothache.

Causes.—Decay is the most common predisposing cause; sudden changes of temperature, derangements of the digestive organs, pregnancy, and general bad health, are the most frequent exciting causes. When the cavity of a tooth has been exposed by caries, the dental pulp is extremely liable to pain from contact with food, liquids, or atmospheric air, and if the health be much impaired, or the central pulp greatly irritated, acute Inflammation, with extreme pain, may result.

Neuralgic Toothache occurs in paroxysms, which come and go suddenly.

Treatment.—If Kreasota, Laudanum, etc., have been used as local applications, the mouth should be thoroughly cleansed before taking any of the following remedies. After three or four doses of any medicine have been administered without mitigating the symptoms, another should be selected.

Leading Indications.—*Chamomilla.*—Toothache from a draught, or suppressed perspiration, and affecting the ear; the teeth feel long and loose; the cheeks and gums are swollen, but

the skin is not very red; and the pains are aggravated by eating or drinking, especially by warm drinks. It is suited to children during teething, with watery, greenish, fœtid diarrhœa.

Belladonna.—Shooting, throbbing pains, affecting several teeth on one side, so that it is impossible to point out the exact tooth; the pains shift about, and are increased by contact of the teeth or by warm or cold applications; determination of blood to the head, flushed face, excessive sensitiveness to external impressions, swelling of the cheek or glands, dryness of the mouth and throat, Inflammation of the dental pulp.

Mercurius.—Decayed teeth; violent scraping or lacerating pain in the cheek-bones, or pains aggravated by eating or drinking, and also at night in bed; pains affecting the entire side of the face—extending to the temples, glands, and ears; Toothache with Salivation (not caused by Mercury); profuse perspirations in bed, which do not afford relief.

Glonoine.—Pulsation in the teeth, with Headache; Toothache after being over-heated and taking cold.

Arsenicum.—Unbearable jerking pains, coming on or aggravated at night. This remedy may be continued for some time after the cessation of pain, to prevent a recurrence.

Arnica.—Pain consequent on extraction or other dental operations; the mouth should be rinsed with a mixture of one part of the strong tincture to about ten of water.

Hepar Sulphur.—Decay of teeth, and easily bleeding gums, from Mercury. Carbo Veg. and Ac.-Nit. are also useful in similar conditions.

Aconitum.—Acute, stinging pain, or hard-aching, relieved temporarily by cold water; there is throbbing, heat of the face, and sometimes chilliness, but not the mental confusion and sensitiveness to noise, light, etc., which indicate Bell. A drop or two of the strong tincture or of the first dilution, applied to the tooth by means of a piece of lint, will sometimes promptly relieve this kind of Toothache.

Administration.—Every fifteen or twenty minutes till the pain is mitigated; afterwards every four or six hours.

The Sulphurous Acid Spray, or a plug of lint dipped in the Acid and inserted in the tooth, will often give immediate relief.

The local application of the galvanic current often affords speedy relief. A mild current for two or three minutes generally suffices.

Stopping Carious Teeth.—If the caries be recent and slight, the decayed portions should be removed, and the cavity filled with a suitable material by a skillful dentist. If the patient be suffering from Toothache, the pain should be removed before stopping. When it is not practicable to have a tooth stopped by a professional dentist, its cavity should be cleaned and filled with white wax, which, by excluding the atmospheric air and the irritation of food, retards the progress of decay. But a better and more durable stopping for non-professionals is the prepared gutta-percha, which, if carefully introduced, after thoroughly cleaning out the affected tooth, may preserve it for years. Dr. Ringer recommends a jelly made of equal parts of Collodion and Carbolic Acid, to be used as a "stopping" for hollow teeth.

Extraction of Teeth.—In a few cases the only remedy for Toothache is extraction; this is especially the case if the decay has proceeded so far as to blacken the tooth, rendering it loose and useless for mastication, prejudicial to neighboring teeth, and a cause of offensive breath. On the other hand, probably in ninety-five cases out of a hundred, considerable experience justifies us in stating that the most distressing cases of Toothache are promptly cured by homœopathic remedies. Our advice therefore is—never extract a tooth merely because it aches, or has begun to decay. Skillful treatment is usually sufficient to remove the pain; and, subsequently, local and general measures may prevent a recurrence of the trouble.

Means of Preservation.—The function of the teeth is so important, that their preservation is a matter of the highest moment. The first teeth determine the nature of the second set, and persons suffer lamentably from early neglect. Proximate decay might be prevented, in five cases out of ten, by simply passing a thread between an infant's teeth, twice a week, from the time of their eruption. Professional inspection should also be sought before symptoms of decay present themselves, and while there is still hope that the dentist may fulfill what should be regarded as his mission, that of saving the teeth. Cleanliness,

with respect to the teeth, is all-important for infants and children, as well as adults. The teeth should be kept clean by rinsing the mouth with pure cold water, and brushing the teeth with a moderately soft brush every morning; and, if possible, after every meal, especially when animal food has been taken; and contact with all disorganizing agents avoided. The idea that frequent brushing the teeth is liable to lacerate the gums and separate them from the teeth is erroneous, for it is one of the best methods of restoring them to a healthy condition when they are spongy and liable to bleed. But when a tendency to decay of the teeth or inflammatory action of the gums exists, a dilute solution of Carbolic Acid, Myrrh, or other dentifrice, should be regularly and continuously used. The habit of taking very hot substances into the mouth should be avoided, as the expansive power of heat may rupture the enamel, which in turn becomes the nucleus of decay. On the other hand, the habit of subjecting the teeth to the opposite extreme of temperature, as by sucking ice, etc., is also to be avoided. Chewing or smoking tobacco, and the habitual use of strong drinks, tend to destroy the teeth. Lastly, as an important means of preserving the teeth, the general health should be maintained in the highest state of integrity, by the use of plain, nourishing food, cold sponging or bathing, and early and regular habits.

Gum-boil.

Definition.—A small Abscess commencing in the socket of a tooth, and bursting through the gum or even through the cheek.

Causes.—Usually, the irritation from a decayed tooth. A cold may excite Inflammation of the dental periosteum, the morbid products of which are thus discharged.

Symptoms.—Pain in a tooth, spreading over a portion of the jaw, with heat, throbbing, swelling, and the formation of an Abscess. This may heal by resolution; or it may burst into the mouth, or even percolate the cheek. The sufferings are sometimes great, worse at night, and incessant till swelling has taken place, when it usually abates. There is frequently some febrile disturbance.

Treatment.—*Mercurius.*—Constant aching, much Salivation,

swelling of the gum, and throbbing. Persons who are liable to Gum-boils should continue the use of this remedy as a preventive twice a day for a week or two.

Aconitum. -In alternation with Merc. for feverishness. Prescribed early, Acon. often checks the disease at the onset.

Belladonna.—Throbbing Headache, flushed face, and sensitiveness to noise, light, etc. Two or three doses may suffice.

Phosphorus.—An excellent remedy for Decay of the teeth of the lower jaw, and when Gum-boils form therefrom.

Hep.-S.—When the swelling softens and throbs (signs that matter is forming); Sil., when it has burst.

Sulphur. -Gum-boils only partially cured by the above remedies; also when they become chronic.

Accessory Treatment.—The application of a roasted fig, as hot as can be borne, to the inflamed gum, will speedily give relief. If the swelling be very extensive, and there are signs of the Abscess coming through the cheek, a poultice of linseed-meal should be applied till suppuration is established, and continued for a short time afterwards. In some cases prompt relief may be obtained by lancing the swelling as soon as its existence is ascertained. Extraction of the decayed tooth is often necessary.

Glossitis—Inflammation of the Tongue.

Symptoms.—Heat and pain in the tongue, which rapidly swells, sometimes to an enormous size, so as to hang out of the mouth; profuse Salivation; the patient may even be unable to eat, swallow, or speak; and suffocation seems imminent.

Causes.—Cold; wounds of the tongue; depreciated health; or, more frequently, mercurial Salivation.

Treatment.—Acon. and Merc. in alternation every hour, for non-mercurial Glossitis, till relief is obtained. If the disease be due to large doses of Mercury, Bell. should be alternated with Hep. S. Ac.-Nit. and Carbo V. are also useful. If there be much œdematous swelling, Apis should be selected.

Ulcer on the Tongue.

Symptoms.—Soreness, slight swelling, and redness of the tongue; small Ulcers form, and discharge pus.

Fissures or Cracks sometimes appear upon the side of the tongue, generally opposite the molar teeth, from Indigestion or the irritation of stumps.

Treatment.—Mercurius Biniod. (2x) is generally the best remedy, except for patients who have been overdosed with Mercury. In the latter case, Ac.-Nit., both internally and as a gargle, should be prescribed. Ars. 6 has been found effective. Hydrastis is also a valuable remedy; a low dilution may be taken, and the strong tincture used as a wash for the mouth (four or five drops to a wine-glass of water). As a local remedy, dilute Carbolic or Nitric Acid is alone of great service (five drops to half a tumbler of water) for rinsing the mouth several times a day.

Sore Throat.

Definition.—Simple soreness or swelling of the throat, uncomplicated by Ulceration, Quinsy, or Syphilis.

Cause.—Catarrh; the Sore Throat being a simple extension of the catarrhal affection. This disease should not be neglected, as it is apt, in some persons, to degenerate into the troublesome form described in the next Section.

Treatment.—*Belladonna.*—Red throat, feeling as if scraped raw, with pain on swallowing.

Mercurius.—Sensation as of a lump in the throat, worse at night, sometimes accompanied by Salivation.

Aconitum.—Dryness, roughness, and heat in the throat, with a choking sensation, Hoarseness and febrile disturbance. If given early, Acon. alone will prove rapidly curative in catarrhal Sore throat.

Baryta Carb.—If Bell. and Merc. are insufficient; and if the inflammation be confined to the tonsils.

Dulc.—If from a wetting, or from damp, foggy air.

Accessory Means.—Frequent draughts of cold water, and the application of the throat compress. Steaming the throat as directed under Inhalation is soothing and often curative, but it should be done at bedtime, when the patient has not again to be exposed to external air. (See the two following Sections.)

Relaxed Throat—Ulcerated Throat and Pharyngitis—Clergyman's Sore Throat.

The affections designated by the above names, being of a similar nature, and requiring similar treatment, are included in this Section.

Pathology.—In the incipient state, there is irritation of the lining membrane of the fauces and pharynx; afterwards Congestion, Inflammation, or relaxation of that membrane, enlargement of the tonsils, elongation of the uvula; and in its advanced stage, morbid deposit and Ulceration of the mucous follicles.

Symptoms.—The patient first complains of an uneasy sensation in the upper part of the throat, with a frequent disposition to swallow, as if something existed there which could thus be removed. If proper treatment be not adopted, the voice soon undergoes a change; it becomes feeble and hoarse, and sometimes, especially towards the evening, there is complete loss of voice. The patient complains of pain in the larnyx, and makes frequent efforts to clear the throat of phlegm by coughing and spitting. On looking into the throat the parts are found to have an unhealthy appearance, being raw and granular, and the mucous follicles filled with a yellowish substance; a viscid mucopurulent secretion may also be seen adhering to the palate and adjacent parts.

Causes.—This condition is probably most often induced by the exercise of the organ of voice when in an inflamed state. An extension of the affection is almost certain to result from exercising the voice during an attack of Sore throat or Hoarseness, as the muscles of the larynx lose their nutrition through extension of the morbid materials from the inflamed mucous membrane. The disease may also result from an immoderate or irregular exercise of the voice, or it may follow inflammatory disease of the bronchial tubes or lungs, by much exercise of the voice before recovery has taken place. It is also occasioned by an unnatural style or tone of reading or speaking, as with preachers and military officers.

Treatment.—Leading Indications.—*Belladonna.*—Besides the symptoms mentioned in the previous Section, Bell. is well

adapted to Ulcerated throat with bright redness, and much pain on swallowing.

Mercurius Iod.—Less pain than for Bell., and chronic cases in scrofulous constitutions.

Calc.-Phos.—In relaxed Sore throat this remedy is often used successfully, after others have been fruitlessly employed.

Kali.-Bich.—Accumulation of tough, stringy phlegm, requiring considerable effort to eject. Chronic Ulceration.

Argentum Nitricum.—Ulcerated throat of a low type, with fœtid breath and foul mucus, and in cachectic patients. A weak solution of the drug may be used as a gargle.

Carbo Veg.—Similar conditions, with Hoarseness.

Lachesis.—Constant irritation in the throat, inducing much hawking, and a choking sensation; there is painful aching, but no deep-seated disorganization, the affection being more of a nervous character.

Hepar Sulph.—In scrofulous constitutions not requiring Merc.-Iod. Also when the disease is consequent on the abuse of Mercury. Ac.-Nit. is also useful in this condition.

Gargle.—To correct the foul breath sometimes existing, a gargle of Perfumed Carbolic Acid should be used. Inhalation may often be effectively resorted to.

Accessory and Preventive Means.—1. *Perfect Rest.*—The most important is to exercise a sore or inflamed organ as little as possible. The treatment of an inflamed larynx, like that of an inflamed joint, should include a state of almost complete rest. As a preventive remedy in the case of clergymen, we would strongly urge the general adoption of Monday as a day of out-of-door recreation and cessation from all work, and thus compensate for the great mental and physical expenditure involved in the discharge of the duties of the earnest minister of the gospel on Sunday.

2. *The Throat Compress.*—When this is applied, the patient should retire, and he will generally have the satisfaction of finding his throat-difficulty much relieved in the morning. In more obstinate cases, the compress should be worn in the daytime, re-wetting it as often as necessary. When discontinued, the throat and chest should be bathed with cold water, followed by

drying and friction. However often repeated, the compress never relaxes the throat.

3. *Cultivation of the Beard.* — The beard and moustache should be permitted to grow, as they afford an excellent protection to the throat, especially in the case of lawyers, clergymen, public singers, and others subjected to the undue or irregular exercise of the organ of voice.

Quinsy.

Definition.—Acute Inflammation of the tonsil or tonsils and subjacent mucous membrane, with general fever.

Symptoms.—It comes on quickly, with rapid swelling of one or both tonsils, severe throbbing pain, hoarseness, and difficult swallowing and expectoration, occasioning a painful and almost constant effort to bring up and detach the viscid mucus which adheres to the inflamed surface; Headache; pain in the back and limbs; foul tongue; offensive breath; and general febrile symptoms. The morbid action generally extends to the uvula, which, becoming swollen and elongated, rests on the base of the tongue, and gives rise to an unpleasant sense of titillation. If the disease be promptly and skillfully met, the inflammatory symptoms subside in a few days, leaving the tonsils enlarged; otherwise, suppuration ensues, indicated by rigors, and throbbing, darting pains in the throat, extending to the ears. When the Abscess is fully mature, it ruptures, to the immediate relief of the patient. Often the Abscess forms in one tonsil, and after its discharge another forms in the other.

Chronic Enlargement of the Tonsils.—Repeated attacks of acute Inflammation, or attacks only partially cured, are followed by chronic enlargement and induration, causing difficult swallowing, hoarse voice, noisy and laborious breathing, especially during sleep, affections of the ears, arising from an extension of the disease along the mucous membrane, and extreme liability, from slight causes, to a frequent recurrence of acute Inflammation.

Causes.—The predisposing are—scrofulous constitution, abuse of Mercury, disorders of the digestive organs, and previous attacks of Quinsy. The exciting are—atmospheric changes, wet

feet, etc. Quinsy is most frequent in plethoric persons, between fourteen and twenty, and for several years is liable to recur unless preventive means are adopted.

Dangers.—Extension of the Inflammation of the uvula, soft palate, the salivary glands, pharynx, and particularly to the root of the tongue, with difficult breathing, etc. But early and skillful treatment usually prevents such complications.

Treatment.—*Aconitum.*—Feverishness, Headache, dizziness, and restlessness; stinging, pricking, fullness, or even choking, the throat looking as if scorched.

Belladonna.—Bright redness and rawness of the affected parts; flushed face, glistening of the eye, Headache, and pain and difficulty in swallowing. Bell. may follow or be alternated with Acon.

Mercurius Biniod.—Swollen throat; copious accumulation of saliva; swelling of the gums and of the tongue; shooting pain on swallowing; a disagreeable taste; fœtid breath; Ulcers on the sides of the mouth; pains from the throat extending to the ear. Profuse perspiration, and nightly exacerbations, also point to Merc.-Biniod.

Baryta Carb.—If given early, before suppuration can supervene, this remedy is said to disperse the engorgement; it is also useful in chronic Tonsillitis.

Hepar Sulph.—When matter has formed. It is especially useful in the scrofulous, in constitutions injured by Mercury, and when a liability to the disease has become established. In our experience it is more rapidly curative than any other remedy.

Lachesis.—Where the left tonsil is affected, and the mucous membrane of a livid color.

Arsenicum.—Severe attacks, with much general prostration, the tonsils becoming putrid or gangrenous.

Calc.-Phos. and *Iod.* are also useful remedies.

Nux Vomica or *Pulsatilla*, when gastric derangements cause, or are associated with, Quinsy.

Administration.—In acute cases, a dose every one or two hours; in sub-acute, every three or four hours; during convalescence, every six or twelve hours.

See also previous two Sections.

Accessory Means.—The constant sucking of ice during the commencement of an acute attack moderates the heat and pain; it also checks the secretion of mucus, which gives rise to dis-

agreeable and painful efforts to detach. In severe cases ice may be employed in this manner till the disease has abated. When ice is not procurable, or when it is not admissible, as when it has not been adopted early in the disease, the next most effectual local application is the steam of hot water, and equally so whether the object be to bring about resolution or to facilitate the suppurative process. Steaming the throat assiduously acts as a fomentation, and removes the mucus from the crypts and follicles of the tonsils. See "Inhalation," p. 50.

In some cases a warm milk-and-water gargle, frequently used, will be found useful and soothing. Further, in severe attacks, a hot poultice should be applied across the throat, extending nearly to each ear; in mild attacks, the throat compress may be used. The patient should remain indoors, and in bad cases, in bed. The air of the patient's apartment should be maintained at a temperature of about 65 deg. or 70 deg., and be kept moist by the evaporation of hot water from shallow dishes near the bed, but proper ventilation should also be preserved.

In chronic enlargement of the tonsils, the application of dilute tincture of Iodine, as a paint, is very useful.

Preventive Treatment.—Freely bathing the neck, jaws, etc., and gargling the mouth and throat every morning with cold water. After exposure to cold, especially if symptoms of Sore throat come on, the compress should be at once applied.

Gastritis—Inflammation of the Stomach.

Acute Inflammation of the stomach, except as a result of poisoning by some irritant, is a rare disease.

Symptoms.—Burning pain increased by pressure; persistent thirst for cold drinks, with inability to retain either food or drink; constant nausea, coated tongue, and foul taste; dyspnœa; faintness, prostration, anxiety, etc.

Chronic Gastritis is indicated by dull pain and oppression soon after a meal, and sometimes vomiting of acid or mucus. The tongue is coated or red at the edges, and the patient often complains of heartburn, flatulence, thirst, burning of the hands or feet, confined bowels, and high-colored urine depositing lithates, lithic acid, or oxalate of lime. It usually accompanies affections of the liver, heart, and kidneys, and is frequent in drunkards.

Causes.—Indigestion; cold draughts; damp, wet, etc.; cold drinks, when over-heated; mechanical injuries; poisons—arsenic, vegetable acids, caustic alkalies, etc.

Epitome of Treatment.—Acon. (usually sufficient in simple Gastritis from cold); Ars. (burning; agonizing distress; unquenchable thirst; wiry, quick pulse); Ant. C. (thickly-coated tongue, nausea, eructations with taste of food); Merc., Bry., Phos., or Ars. (chronic cases).

Accessory Treatment.—In acute cases, small pieces of ice may be swallowed, and during the severity of the symptoms the patient should be fed by nutritious enemata. Fomentations to the stomach give much relief. During convalescence the patient must only gradually return to solid kinds of food. On recovery, the stomach remains for some time feeble, and without due care is liable to atonic Dyspepsia.

In chronic Gastritis, the most important points are —attention to diet and general habits as recommended in the Section on "Dyspepsia." Cold water, the substitution of chocolate or cocoa for tea or coffee for the morning or evening meal, and a spare wholesome diet, are valuable adjuncts to the treatment

Chronic Ulcer of the Stomach.

This disease is more common than is generally supposed, owing to its non-acute character, its giving rise to some of the symptoms of chronic Dyspepsia, and its tendency, in about fifty per cent. of cases, to disappear spontaneously. It occurs twice among women for once in men, chiefly during adult life, and is more frequent in the poor than the rich. There may be one, two, or more Ulcers in the same stomach.

Symptoms.—They are often not very clear; but there is generally pain, or a severe wearing or burning sensation, over the middle of the back, and in the stomach, the latter felt just below the breast-bone, of a dull, sickening character, and worse after food. If the Ulcer is on the anterior surface of the stomach, lying on the back relieves the pain; if on the posterior surface, leaning over a chair affords relief. Sometimes there are violent pulsations accompanying the pain, or Pyrosis, or vomiting of food, with relief to the pain; the patient loses flesh; the pulse is feeble;

the bowels usually constipated; and, in women, the monthly period is deranged.

Dangers.—The dangers to be apprehended are—perforation, when the contents of the stomach escape into the abdominal cavity, setting up Peritonitis; Hœmorrhage, which occurs in about four per cent. of cases, generally soon after a full meal; and exhaustion, consequent on want of nourishment from defective digestion. When Ulcer of the stomach is suspected, the patient should always be under the care of a physician.

Treatment.—Ars., K.-Bich., Kreas., Atrop., Titan., or Hydras., are the chief remedies. For Hœmorrhage see next Section.

Accessory Means.—Ice should be repeatedly swallowed in small pieces; it allays the sickness and pain so often experienced; it also checks bleeding when it occurs. The diet should be simple and digestible: milk-and-soda-water, farinaceous food, arrowroot, and beef-tea. In bad cases, complete rest for the stomach for some time, giving nutriment by enemata, is necessary.

Hæmatemesis—Vomiting of Blood.

Symptoms. — Hæmatemesis is usually preceded by nausea, distress or pain of the stomach, or indigestion; a feeble pulse, pallor, sighing, and other signs of faintness.

The following table will enable the reader to determine whether the discharge of blood is from the lungs or stomach:

FROM THE STOMACH.	FROM THE LUNGS.
1.—In Hæmatemesis the blood is of a dark color.	1.—In Hæmoptysis the blood is of a bright-red color.
2.—The blood is vomited.	2.—The blood is generally coughed up.
3.—The blood is often mixed with food, and is not frothy.	3.—The blood is generally frothy and mixed with sputa.
4.—Is preceded by nausea and stomach distress.	4.—Is often preceded by pain in the chest and dyspnœa.
5.—Blood is generally passed with the evacuations from the bowels.	5.—Blood is not found in the stools.

Treatment.—*Aconitum.*—Hæmorrhage with flushed face, Palpitation and anguish; also for the premonitory symptoms—shiverings, quick pulse, etc.

Hamamelis.—Venous Hæmorrhage, from any organ; also when the state of the vessels leads to the Hæmorrhage rather than any change in the normal blood constitutents. We have so often used this remedy successfully that we now employ it more frequently than any other for Hæmorrhage.

Ipecacuanha.—Bright-red blood, with paleness of the face; nausea; frequent, short Cough; salt taste, blood-streaked expectoration. Often useful after, or in alternation with, Acon.

China.—Debility consequent on Hæmorrhage,—feeble pulse, cold hands or feet, fainting, etc.

Arsenicum.—Difficult breathing, extreme Palpitation, anguish, burning heat, thirst, small and quick pulse, etc.

Ferrum.—Spitting or coughing up of blood, with Palpitation, faintness, etc.

Arnica.—Hæmorrhage from an accident, or severe exertion.

Vicarious Hæmorrhage. — In vicarious Hæmorrhage, as in females when bleeding from the nose or stomach takes the place of the menstrual discharge, the treatment should be directed to restoring the normal monthly function.

Accessory Measures.—Calmness and judgment should be exercised, or the discharge of blood may cause alarm to the patient and his friends, and unfit them for carrying out the measures necessary for the safety or even life of the sufferer. The patient should immediately lie down on a sofa or mattress, with the head and shoulders elevated; all tight-fitting clothes should be removed or loosened, quiet maintained, and no talking, crowding, noise, or confusion permitted; at the same time the room should be kept cool and airy—at about 55 deg. Fahr. Ice is a most useful agent for arresting Hæmatemesis, and it should be swallowed in small, oft-repeated pieces; it then comes in more immediate contact with, and tends to constrict, the bleeding vessels.

It is also important in Hæmorrhage from the stomach that the organ should have perfect rest. As long as any tendency to Hæmorrhage continues, the patient should remain in bed, and take nothing by the mouth except sips of iced-water. Food, beef-tea, etc., should be introduced by the rectum.

Should faintness occur, no alarm need be excited, because it is

often nature's method of arresting the bleeding. After the Hæmorrhage, the patient must still be kept cool and quiet, and the diet be light and unstimulating, while the posture of the body should be such as to favor the return of blood from the bleeding organs. Should the faintness persist, iced champagne is often an excellent restorative, and is not likely to induce vomiting.

Dyspepsia—Indigestion.

Physiology of Indigestion.—Animal life has been compared to a fire; for just as fire requires fuel for its consumption, so life requires food for its sustenance. Like fire, too, the processes of life are attended with the production of a certain amount of heat. The body, moreover, is in a condition of perpetual change, consequent on its various functions, and the wear-and-tear of life. This change continues even when a person lies at rest, for the heart continues to beat, respiration goes on, the blood circulates, the brain is in action, and numerous other functions uninterruptedly continue, from which there results a waste which must be repaired. Under ordinary circumstances, however, when both the mind and body are actively employed, the waste of human tissue is much more rapid, and a large amount of new material is required for its reparation. A man weighing from 140 to 180 pounds, loses, in twenty-four hours, three to four pounds of matter in the performance of the various duties of life. Now the matter thus expended is replenished by Digestion, Respiration, and Circulation. The organs of digestion receive the food, and change it into a milky fluid, the chyle, which being conveyed with the venous blood into the right side of the heart, is propelled by the contraction of that organ into the lungs; here it is intimately exposed to the atmospheric air, and is thereby converted into bright arterial blood. It is now received into the left side of the heart, and is diffused thence through the general circulation, and, by means of the capillaries, it enters into the various tissues of which the body is composed. Another result of the functional activity of the body is, that it is maintained at a certain temperature. If a thermometer be placed under the tongue, the temperature will be found to be 98 deg. Fahr., which is greater than that of the atmosphere; this heightened tempera-

ture being the result of the combustion of food and effete matter in the system. The function of digestion, then, first repairs the waste of the body; and, secondly, maintains it at a proper temperature.

Definition.—Indigestion is a deviation from the healthy function just described, and is one of the most common affections the physician has to treat.

Symptoms.—These vary greatly, both in character and in intensity, but there is commonly one or more of the following:—Impaired appetite, flatulence, nausea, and eructations which often bring up bitter or acid fluids; furred tongue, often flabby, large or indented at the sides; foul taste or breath, heartburn, pain, sensation of weight, and inconvenience or fullness after a meal; irregular action of the bowels, headache, diminished mental energy and alertness, dejection of spirits, palpitation of the heart or great vessels; and various affections in other organs. Disturbances in remote parts may be due to reflex action; or to the effects of distention of the stomach, which, encroaching on the space occupied by the lungs, heart, or other organs, impede their healthy action.

Occasionally, one or two symptoms are so prominent as to exclusively concentrate the patient's attention, who regards them as diseases *per se*. Loss of appetite, flatulence, etc., are examples of the most commonly prominent symptoms.

Loss of Appetite (*Anorexia*).—The natural requirements of the body might be neglected but for certain sensations—hunger and thirst—which, no doubt, depend upon some peculiar condition of the nerves. The receipt of alarming or startling intelligence often arrests, in an instant, the keenest appetite. Hunger is much influenced by habit, and returns with great regularity when meals are taken at a uniform hour. Many substances which are non-nutritious destroy or lower the susceptibility of the nervous filaments of the stomach, and thus blunt the natural sensations of hunger; such, especially, are tobacco, opium, and ardent spirits. Too little out-of-door exercise, irregularity of meals, eating between meals, and late hours, are some of the most frequent causes.

Loss of appetite during acute disease or a weakened state

of the system should be respected, for thrusting food into the stomach in spite of its dictates will generally give rise to more serious symptoms.

Sometimes instead of loss of appetite there is voracious or depraved appetite; these symptoms are usually associated with Chlorosis, nervous irritation from worms, etc.; they can only be removed by correcting the condition on which they depend.

Flatulence.—This is frequently a prominent and persistent symptom, and is caused by defective nerve-force, or general debility; food may be detained in the stomach and undergo fermentation, owing to imperfection or arrest of the vital and chemical processes characteristic of health. At other times flatulence is apparently generated by the mucous membrane of the intestinal canal; for the symptoms are very apt to arise in dyspeptic persons when a meal is delayed beyond the accustomed hour, or when the stomach is empty. Flatulence is often associated with faintness, nausea, palpitation, and other disagreeable sensations.

Heartburn.—An acrid or scalding sensation, commencing in the stomach and rising up the throat to the mouth, generally from excess of animal food, and is especially liable to occur in gouty constitutions. Hiccough (*singultus*) is a common accompaniment of Heartburn, and consists of brief Spasms of the œsophagus. In infants it is easily removed by administering a small quantity of milk or water.

Nightmare.—In this condition the patient experiences confused and frightful dreams, with a sense of weight or pressure impeding breathing and producing great anguish; or he fancies himself in imminent danger or difficulty, from which he vainly strives to extricate himself, until at length he succeeds in uttering a cry, or moving, when the distressing condition terminates. It is caused by disorder of the digestive organs, and most frequently follows a late, especially a heavy supper. It may also be induced by fatigue, or an uneasy posture in bed, or in children, by enlarged tonsils (see Section on "Quinsy"); sometimes the cause is very obscure, and requires professional examination and treatment.

Causes of Indigestion.—Irregularities in diet, such as

indulgence in the luxuries of the table, partaking of rich, highly-seasoned, heavy, fat, sour, or bad food; eating too quickly; imperfect mastication of food; eating too frequently, or, on the other hand, too long abstinence from food; the use of tobacco, wine, and alcoholic beverages; too little out-of-door exercise; excessive bodily or mental exertion; late hours; exposure to cold and damp, etc. Business and family anxieties are frequent causes of Dyspepsia, and their operation is very general and extended, implicating not only the mucous coats of the stomach, but the liver, the bowels, and often the whole nervous system. "The battle of life" is too often fought, not only with much wear and tear, but with almost overwhelming anxieties and disappointments; and the digestive organs are often the first to suffer from depression of the mind. In this respect, the cause is often put for the effect, the common remark being that depression of spirits accompanies Indigestion; but it is more true to say that Indigestion accompanies depressed spirits. When the mind is depressed by disappointment or anxiety, there is a corresponding depression of the nervous energies, and so the stomach, in common with other organs, loses vital energy.

Hence, in the treatment of Dyspepsia, the use of medicines and the observance of hygienic rules and habits must ever go hand in hand; for the former, however correctly prescribed, will, alone, be unavailing.

Treatment.—Leading Indications.—*Nux Vomica.*—Pain, tenderness, and fullness of the stomach after meals; Heartburn; sour acid risings; flatulence; frequent vomiting of food and bile; sour or bitter taste; the head is confused, aches early in the morning, the patient feels indolent and sleepy after a meal, and unfitted for any exertion; there are a sallow, yellowish complexion, and an irregular action of the bowels, with ineffectual urging. Nux Vom. is particularly indicated in persons of dark, bilious complexion, who employ their brains too much, but take too little open-air exercise, eat largely, and drink alcoholic liquors. A tendency to Piles is a further indication for Nux V. and also for Sulph., which may advantageously follow it.

Pulsatilla.—Indigestion from fatty food or pastry, with much secretion of mucus; heartburn; acid, bitter, or putrid taste; fre-

quent loose evacuations. It is specially suited to females with deranged period, and to persons of a mild disposition.

Bryonia.—Pressure or weight, as of a stone, after food; frequent bitter or acrid eructations; nausea or bilious vomiting; stitch-like pain, from the stomach to the blade-bones; painful soreness at the pit of the stomach on coughing or taking a deep breath; Constipation; severe Headache, worse after movement; obstinate, irritable disposition.

Lycopodium.—Atonic Dyspepsia of weakly patients, delayed digestion from deficient glandular secretion and muscular energy; too little nervous force to spare for digestion, so that during its process an irresistible drowsiness comes on, and the sleeper awakes exhausted; also when, from like causes, flatulence collects in abundance, and the bowels are utterly torpid (*Hughes*).

Antimonium Crudum.—Aversion to food, or loss of appetite: sensation as if the stomach were overloaded; eructations, tasting of the food; nausea, or vomiting of mucus and bile; escape of flatulence, with an early reproduction of the symptoms; alternate Diarrhœa and constipation; pimply eruptions on the face, or sores on the lips or nostrils.

Hepar Sulphuris.—Chronic Indigestion; nearly all kinds of food disagree; craving for stimulants; also if Mercury has been too freely prescribed.

Sulphur.—Cases of long standing, when only partial relief has followed the use of other remedies; and as an intercurrent remedy. It is particularly required in strumous constitutions, and for Indigestion associated with or following acute or chronic eruptions, Piles, Constipation, irritability, glandular swellings, affection of the eyes, or other scrofulous disorders.

Carbo Veg.—Chronic indigestion, with flatulence, heartburn, headache, debility, etc. Very useful in the aged.

Calc.-Carb.—Defective digestion and assimilation, with obstinate acrid eructations, relaxed bowels; sensitiveness to cold and damp; fatigue after slight exertion; Cough; gradual emaciation; and, in females, too frequent and profuse menstruation. Follows Puls. well in chronic cases.

Accessory Measures.—The following points in the treatment and prevention of indigestion should, as far as possible, be adopted.

1. *Mastication.*—The reduction of food to a state of minute division in the mouth is a most essential step towards easy and perfect digestion. Digestion really means solution; and as solid substances, intended by the chemist for solution, are first reduced in the laboratory by the pestle and mortar, so must the teeth perform a precisely similar process with the food. Not a particle capable of being further reduced by the teeth should be admitted into the stomach, as the work of the former can never be fully performed by the latter. A stomach, especially a weak stomach, acts tardily and imperfectly upon food introduced in an incomplete state of comminution. Further, food requires to be well masticated, that it may be duly mixed with saliva. In front of the ear we have the parotid gland; beneath the jaw, at the sides, the submaxillary; and under the chin, the sublingual; all these secrete saliva, which pours into the mouth through minute openings during mastication. This salivary secretion is not only intended to moisten and lubricate the food, but is a most essential chemical aid in digestion, such as no other liquid can supply. The action of the saliva is especially necessary for the digestion of vegetable food; for it is only by means of this fluid that such articles of diet as potatoes, bread, rice, etc., are rendered at all capable of absorption. We therefore warn the busy, the studious, the solitary, or, on the other hand, those persons who talk too much during meal-time, of the danger of neglecting the perfect mastication of their food. The loss of teeth is a frequent cause of Indigestion, but now, happily, generally remediable; for when the natural teeth are lost, the skill of the dentist supplies us with useful substitutes.

2. *Overloading the Stomach.*—Too large a quantity of food interferes with digestion in two ways. (1) By so distending the stomach as to interfere with those movements which it undergoes during the process, and impairing its subsequent necessary contraction. (2) The secretion of gastric fluid is probably of a uniform quantity; therefore an inordinate amount of food would fail to be duly saturated with this indispensable fluid. The normal limits of the stomach are always exceeded when food has been taken in such a quantity as to produce an uneasy sense of distention. After a long abstinence from food, as in the case of

persons who dine late and take too little lunch, there is great danger of eating too much, unless the meal be taken slowly, or finished before the sensations of hunger are completely appeased. The same danger is likely to arise from too many dishes, or too stimulating articles of food; a morbid craving is thus excited long after the natural appetite would have been satisfied.

3. *Suitable Food.*—As a rule, animal food is easier of digestion than vegetable, and it is well known that a weak stomach is much more liable to flatulence, and other symptoms of indigestion, after vegetable food than after animal. Indeed, the teeth of man partake of an intermediate character, as he is no doubt intended to subsist both on animal and vegetable food; so that a due admixture of both is probably more easily digested than a more or less exclusive use of either. It is important to remember that starch is not a nitrogenous or flesh-forming substance. Foods, therefore, the chief constituent of which is starch, as potatoes, rice, sago, etc., should be eaten only as additions to food containing a large amount of nitrogenous materials. As Dr. Chambers tersely remarks, "to make a person omnivorous you must first make him carnivorous." Further, it is especially necessary that the dyspeptic should select tender and perfectly fresh animal food, and have it cooked so as to retain all its natural juices. Hard, dried, cured meats—ham, tongue, sausages, and the like—are especially to be avoided. In the same category we may place veal, pork, twice-cooked meats, salmon, lobsters, crabs, salads, cucumbers, raw vegetables, new-baked bread, and all other substances known to disagree with the patient. The last remark is important; for if pain or discomfort follow any kind of food or drink it should be regarded as a warning to avoid it afterwards.

4. *Beverages.*—As a general rule, patients who suffer from indigestion are better without malt liquors, wines, or spirits; a high standard of health being often best maintained altogether apart from the use of alcohol. Perhaps certain patients suffering from acute Indigestion, or others in whom the powers of life are much enfeebled, may be benefited by a moderate and temporary use of stimulants. But if the use of these liquors be followed by excitement, flushing of the face, or any other inconvenience, they should at once be given up. Even when their use is at first

attended by apparent benefit, they should be discontinued when the circumstances which required them no longer exist; for in our practice we have found that the most severe and obstinate forms of Indigestion occur as the result of the excessive use of alcoholic beverages. In addition to cocoa or tea, for the morning and evening meals, the moderate use of pure water is almost the only fluid required. This liquid, so often despised, and even regarded by many as prejudicial, is one of the most potent means for preventing or curing Dyspepsia. Water, however, should only be taken in moderation. Two or three glasses a day is enough for most persons. It is best to avoid drinking cold water at meals, except very sparingly; not, as is generally supposed, because it dilutes the salivary or the gastric secretion, but because it reduces the temperature of the stomach, and checks its action.

5. *Disposition in which to Eat.*—A cheerful and tranquil frame of mind, especially during meals, is a most essential point in the treatment and cure of Indigestion. Cheerful conversation and ease of mind favor digestion by increasing the secretion of gastric juice. The aliment received under pleasurable circumstances may be expected to furnish in abundance, and in the highest state of perfection, the secretions necessary for good digestion.

6. *General Habits.*—Mental or bodily occupations should not be resumed immediately after a full meal; nor should food be taken without a few minutes' pause after exhaustive fatigue. Violent muscular exertions arrest digestion by engaging the nervous energies in other directions. The weary man, whether weary from the sweat of the brow or the sweat of the brain, should rest before he eats; and if the cause of fatigue has been in operation till the time of rest approaches, solid food might then be productive of the most serious results. Under such circumstances, if nourishment be deemed necessary, it should be limited in quantity and of the lightest kind, as a cup of beef-tea, cocoa, or chocolate, or the yolk-of-an-egg, well beaten up with milk. We particularly recommend the General Plan of Dietary sketched in Part VI. for general adoption. Regularity in the habits of life, such as in taking food, sleep, exercise, etc., is an important condition in the prevention of Dyspepsia. Feather

beds should be avoided; the patient should retire and rise early, bathe or sponge the body every morning with tepid water, and take moderate open-air exercise daily. An occasional change of air and scenery exercises a wonderful influence in removing or preventing an attack of Indigestion, divesting the mind of its ordinary train of thought, business and family anxieties, or gloomy pondering over personal ailments. Fortunately, our railway system is now so perfect and wide-spread, and withal so economical, that few, by the exercise of a little foresight, need be deprived of so potent an aid to good health.

Gastrodynia—Pain or Spasms in the Stomach.

Pain in the stomach may be spasmodic or neuralgic. The latter has been already treated of.

Symptoms.—Severe pinching, gnawing, or contractive pains in the stomach, generally occurring after taking food.

Causes.—Highly-seasoned or indigestible food; stimulants, coffee, and tobacco; long fasting; exposure to cold or damp· etc. Gastrodynia is usually but a symptom of Indigestion.

Treatment.—Nux V. (severe Spasm); Bry. (in rheumatic patients); Arn. (soreness); Bism. (dull, pressing pain, with frontal headache); Ferr. (Anæmia or Chlorosis); Ars. (pain and vomiting after food; periodic).

Accessory Treatment.—In severe cases two or three folds of flannel, wrung out of hot water, and applied as hot as can be borne; in mild cases, warmed dry flannels. Attention to the "Accessory Measures" suggested in the previous Section is often alone sufficient to cure Gastrodynia.

Vertigo.

In a mild form, Giddiness is generally the result of Dyspepsia or nervous exhaustion. When Vertigo is severe and recurs, it often points to disease of the brain, heart, or kidneys. Vertigo generally exists in structural changes of the brain.

Epitome of Treatment.—Nux V., Puls., Bry. (from Indigestion); Bell., Gels., Glon., Cocc. (from Congestion); Phos., Ac.-Phos., China, Zinc. (from brain-fag).

Bilious Headache.

The Headache of Indigestion is commonly termed bilious. It arises in connection with stomach derangement or some excess, and is generally accompanied by foul tongue and breath, pain in the stomach, nausea, deranged bowels, etc. It is necessary to discriminate between this and Headache of a different nature and arising from other causes, as nervous Headache, from exhaustion consequent on Hæmorrhage, prolonged lactation, Hysteria, etc.; or toxæmic, as in Enteric fever, Scarlet fever, etc.; or organic from cerebral disease.

Epitome of Treatment.—Iris (copious bilious vomiting); Cham. (in females, from cold or worry); Nux. V. (with Constipation); Bry. (vomiting of bitter fluids); Acon. (from Catarrh); Nux Mosch. (constant, with salty taste); Ipec., Puls., Ant.-C., Merc., Sepia.

Pyrosis—Water-brash.

Symptoms.—Eructation of an acid or tasteless watery fluid, sometimes in considerable quantities. It seems to arise from closure of the æsophagus by muscular Spasm, so that the trickling saliva is prevented from passing into the stomach, and ascends into the mouth without any effort. It is often accompanied with pain, and is sometimes a symptom of organic disease of the stomach or liver, but is commonly due to chronic Gastric Catarrh.

When arising from Indigestion it is generally due to the too exclusive use of a vegetable diet, or to other indigestible food; it is of common occurence amongst the poorly fed.

Treatment.—Carbo V.—Acid or acrid eructations, with flatulence, and, usually, Constipation, sometimes Diarrhœa. Lyc. in chronic cases; Nux. V., Ac.-Sulph., Bry., Puls., and Ac.-Acet. are also recommended.

In obstinate cases of this disease the most brilliant results often follow Krukenburg's prescription:—"When the patient is hungry, let him eat buttermilk, and when he is thirsty let him drink buttermilk." Fresh milk is not so well borne, as it curdles in the stomach.

Vomiting — Sickness.

Causes.—Improper food or too large a quantity; a disordered condition of the digestive functions; pregnancy; disease or irritation in other organs, as the brain, kidneys, uterus, etc.; Cancer or Ulcer of the stomach; mechanical obstruction of any part of the intestinal canal; morbid states of the blood; it also occurs in most of the eruptive fevers.

Prognosis.—Nausea and vomiting occurring in diseases of the brain, as in Epilepsy, are unfavorable indications; on the contrary, in pregnancy or Hysteria, no alarm need be felt, as they are merely symptomatic of irritation conveyed by the nervous system to the stomach. We may learn much by observing the time of the occurrence of the vomiting, the nature of the matters ejected, and the extent and urgency of the symptoms. If vomiting afford relief, and the nausea, oppression of the chest and stomach, and Headache cease, the case may be considered favorable; if, on the other hand, the symptoms preceding vomiting are not relieved by it, but increase, the disease must be regarded as having taken an alarming form.

Treatment.—Should vomiting arise from over-repletion, or from indigestible food, it may be regarded as a conservative effort, and should be encouraged, within proper limits, by drinking warm water, or tickling the throat with a feather until the offending material is expelled. If sympathetic of organic disease, the treatment should be directed to the primary cause, while temporary relief from the vomiting may be obtained by the use of one of the following remedies. Under other circumstances, a remedy may be selected according to the causes of the vomiting, and the symptoms which exist.

Ipecacuanha.—Simple copious vomiting, with nausea; greenish or blackish mucous vomit; Diarrhœa.

Kreasotum.—Chronic persistent vomiting. When the affection does not depend on simple Indigestion, Kreas. is the best remedy; also for persistent retching, without vomiting.

Secale. — Chronic vomiting of sour mucus, with offensive eructations.

Arsenicum. — Vomiting, purging, great prostration, with a

burning sensation in the stomach and throat, and cold hands and feet. When caused by Cancer or other malignant disease of the stomach, this remedy often relieves.

Zincum.—The food is suddenly ejected, without retching; and the patient becomes emaciated.

Ant.-Crud.—Nausea, heaviness of the stomach, foul white tongue, and dislike to food, which continue unabated after free vomiting.

Iris.—Bilious attack. Often an effectual remedy.

Accessory Means.—Small pieces of ice placed on the tongue are very grateful, and tend to allay the sickness. The diet should be simple, nourishing, and non-irritating. Beef-tea is, probably, most suitable, and may be given every one to three hours, in small quantities, till other food can be borne. In many cases soda-water-and-milk, in equal proportions, given in small quantities, freshly mixed, can be retained and digested. The stomach will often retain bland liquid diet when it would reject any other.

Sea-sickness.

This affection, though very distressing, is not serious; it is caused by the motion of the vessel. The seat of the affection is in the brain, and the sickness probably arises from a deficient amount of blood supplied to that organ. The retching and vomiting frequently recur, with intervals of extreme physical prostration, a sinking sensation at the pit of the stomach, Vertigo, Headache, etc. The symptoms, especially the Vertigo, are most severe in the upright posture, and are at once relieved by a strictly horizontal one.

Persons of delicate and sensitive organization, with weak heart, quick pulse, and tendency to Palpitation, are most liable to be affected, and are sometimes subject to similar derangement from the oscillation of a carriage or swing.

Treatment.—Petrol., Cocc., and Nux V. are the best preventives; and Kreas., Tabac., or Petrol., during the sickness. Petrol. should be taken on going on board; a drop or two on a small piece of sugar, repeated every two or three hours. From personal experience in two voyages across the Atlantic, we recommend this

as the best remedy for sea-sickness. *Nux V.*—For Indigestion with Constipation we found this remedy of great value, and administered it in many cases with marked good results. Ver.-Alb., Podoph., and Rubini's Camphor have also been recommended. Chlor.-Hyd., in doses of thirty grains, will often enable the worst sailors to make a short sea passage in perfect comfort.

Accessory Means.—If the previous statement be correct—that sea-sickness is caused by an insufficient supply of blood to the brain—our first effort should be an attempt to facilitate the afflux of blood to that organ, by a favorable posture, and by imparting strength to the heart's action. The horizontal posture, therefore, should be enjoined; and small quantities of arrowroot, beef-tea, or such light diet taken as best agrees with the patient. Champagne—iced if possible—is the best beverage, if it suits the stomach. Soda-water with a small quantity of brandy often suits well. When the symptoms are subsiding and the appetite is returning, a cup of good coffee without milk or sugar, with a plain biscuit or a small slice of toast, is often grateful.

Prevention.—For several days before embarking, indigestible food, over-repletion, or any irregularity in diet, should be avoided. At the same time one of the preventive remedies may be taken. Dr. Marsden informs the author that he has found those medicines most efficacious which, taken a day or two before going on board, improve the digestion, and act downwards. During the early part of the voyage, unless the weather be very fine, the patient should remain in his berth in a horizontal posture, and take chiefly liquid food—beef-tea, chicken-broth, etc. Good draughts of warm water, in the author's experience, more often relieve than anything else. A girdle, moderately tight, round the waist and abdomen, a magnetic belt, or a stomach compress, have also been recommended. Warmth to the stomach and feet tends very much to prevent sea-sickness. Anything to amuse, and divert the attention from the waving posture, is useful.

Enteritis.

Definition.—Inflammation of the small intestines, throughout a greater or less extent of their course, involving all the coats of the intestines, or only the mucous lining. In the latter

case the disease is termed Muco-enteritis, and occasionally affects children from six to eight months old.

Symptoms.—Enteritis is preceded by rigors, dry hot skin, quick wiry pulse, thirst, nausea or vomiting, and often confined bowels. The patient complains of severe pain in the abdomen, especially concentrated around the navel, which is aggravated by pressure. He lies on his back, with his knees raised, so as to relax the abdominal parietes.

Diagnosis.—Enteritis may be distinguished from acute Peritonitis by the more local character of the pain and tenderness, by the pain being generally limited to the vicinity of the navel, and by the symptoms being less acute; from Colic, by the tenderness on pressure, the quick pulse, fever and prostration; from intestinal obstruction by the early occurrence of the pain and tenderness, and the rapid progress of the case.

Causes.—Cold; errors in diet, such as eating too many raw apples or pears; the use of strong drinks; worms; internal strangulation of the intestines; or it may arise as the sequel of some general disturbance, as some form of fever.

Treatment.—*Arsenicum.*—Severe burning pains around the navel, obstinate vomiting, and excessive prostration.

Mercurius Cor.—Hard, distended, and tender abdomen; fœtid watery stools; constant urging to stool, followed by hard straining, and evacuations of mucus or mucus and blood.

Colocynth.—Inflammation of the large intestines, with drum-like distention of the abdomen; severe gripings; bilious nausea or vomiting.

Veratrum Alb.—Great thirst; furred tongue; nausea and vomiting; severe prostration; cold extremities, etc.

Aconitum.—At the commencement, and during the course of the disease, alone, or in alternation with any other remedy indicated, to moderate fever and pain.

Accessory Means.—Perfect quiet in bed. Hot fomentations to the abdomen, sedulously employed, and followed by a carefully applied wet compress. Ice or cold water may be freely swallowed. When the Inflammation subsides, beef-tea, milk-and-soda-water, or Neave's farinaceous food may be given.

Dysentery—Bloody-Flux.

Definition.—A febrile disease, consisting of Inflammation and Ulceration of the minute lenticular and tubular glands of the lining of the large intestine, attended with tormina, followed by tenesmus, and scanty mucous or bloody stools.

Symptoms.—These vary considerably with the type of the disease. Simple cases occur, and run their course, with little constitutional disturbance; but an acute attack commences with a chill or rigor, and is soon followed by quick pulse, hot skin, flushed face, and often pain in the head, thirst, furred tongue, nausea and vomiting. Griping, irregular pains in the abdomen —tormina—are experienced, and the patient is often tormented by a sensation as if there were some excrementitious matter in the bowel ready to be evacuated, and he is irresistibly impelled to strain violently to remove the irritation. This, the most marked symptom of Dysentery, is called tenesmus, and although the desire to go to stool is frequent and urgent, the patient is unable to pass anything except a little mucus and blood, shreds of fibrine which the patient often thinks to be the coats of his own bowels, and, sometimes, balls of hardened fæces, called scybala. The spasmodic action often extends to the bladder, exciting frequent efforts to pass water. In hot climates the attacks are acute and violent, the pain being very severe around the navel and at the bottom of the back-bone; sometimes Hæmorrhage occurs from an artery being opened by Ulceration, or Abscess of the liver is a sequel of the disease. In unfavorable cases, loss of strength and flesh follow, small and rapid pulse, anxious and depressed countenance, the abdomen becomes increasingly tympanitic, with bearing-down of the lower bowel, burning heat, hiccough, sudden cessation of pain, cold sweats, sharpened features, Delirium and death. In favorable cases, the strength is not much reduced, while warmth and moisture of the skin, and a more natural character of the evacuations, indicate a tendency to recovery.

Causes.—"I believe Dysentery to be caused by the action of a poison in the blood having a peculiar affinity for the glandular structures of the large intestine. This poison I believe to be a malaria generated in the soil by the decomposition of organic

matter." (*Maclean*). The effluvia from dysenteric stools are infectious, and, consequently, are a cause of the disease. It is probable that the following are efficient agents in the propagation, rather than in the causation of Dysentery:—Exposure to extreme and sudden changes of temperature, as from heat of day to the cold and damp of night; impure water; insufficient protection from cold and wet, as sleeping on the ground with the abdomen insufficiently covered; intemperance; a poor or irregular diet, etc. It is therefore often epidemic among people reduced by privation.

Treatment. — *Aconitum.* — If febrile symptoms are well marked, the early use of this remedy often arrests the disease at its onset. It should be administered several times, at intervals of an hour.

Merc.-Cor.—Bloody evacuations, mucus mixed with blood, or almost pure blood; severe pain and straining before, and especially after, discharge; urine completely suppressed, or passed with great difficulty, with severe tenesmus of the bladder, while yet the patient lies perfectly quiet and composed.

Aloes.—Shooting, boring pains near the navel, increased by pressure; swelling of the lower part of the abdomen, which is sensitive to pressure; distention in the left side and along the track of the colon, worse after eating; fainting during stools; stools of bloody water; violent tenesmus; frequent cutting pains with pinching in rectum and loins; heaviness and numbness in the thighs.

Arsenicum.—Great thirst, but patient drinks little at a time; cold breath; tongue looks blue; perspiration sticky and cold; eruptions may appeear on the skin; cold extremities; excessive weakness; patient despairs of life, and is very restless before stool, feeling as if the abdomen would burst; during stool, feeling of contraction above the anus; after stool, burning in rectum, trembling in limbs, also palpitation of the heart and exhaustion; putrid fæces; urine offensive, greenish, and passed with great pain. Especially indicated in constitutions enfeebled by previous disease.

Colocynth.—Often required after Merc.-Cor., especially when colicky pains are very severe, the abdomen distended, tongue

white, and discharges slimy; the patient is doubled up with pain, pressing any object against the abdomen for relief; fruitless attempts to vomit; burning along the sacral region.

Ipecacuanha.—Autumnal Dysentery, with nausea and vomiting, uneasiness, straining, and Colic; the evacuations are frothy, fœtid, and afterwards bloody, sometimes mucous and greenish. Often advantageous in alternation with Bry.

Bryonia.—Pains aggravated by the least movement, even of the arms; great thirst for large draughts of water.

Belladonna.—At an early stage, if the pains appear and disappear suddenly; sharp, shooting pains; great bearing down; tenderness of abdomen on pressure.

Nux Vom.—The first to be given after allopathic drugging; special symptoms are small and frequent evacuations, with violent tenesmus, which ceases with the evacuation; pain in the back, as if it were broken, in the region of the sacrum.

China.—Dysentery in marshy districts; putrid and intermittent Dysentery; weak, thready pulse; cold extremities.

Rhus Tox.—Involuntary nocturnal discharges; cutting pains in the abdomen; almost constant urging to stool.

Sulphur.—Obstinate cases, where ordinary remedies fail in affording relief, especially where there is constitutional taint, or hæmorrhoidal disease; also as an intercurrent remedy.

Administration.—In urgent cases a dose every twenty or thirty minutes; in less severe, every three or four hours.

Chronic Dysentery.—Phos., Ac.-Nit., Sulph., China, Calc.-C., Ver.-Vir., and Ac.-Phos., are our chief remedies.

Accessory Means.—The patient should maintain a recumbent posture in bed, in a well-ventilated apartment, and, in severe cases, use the bed-pan instead of getting up. Local applications afford great relief, the best of which is the Abdominal Compress. If the pains are very severe, large hot poultices, or flannels wrung out of hot water, should be applied over the abdomen, a second hot flannel being ready when the first is removed. Great benefit often results from injections, if there be not too much inflammation to admit of the introduction of the enema tube: they may be administered after each evacuation if they prove beneficial. The first two or three injections may consist of from half a pint

to a pint of warm water, the temperature being afterwards gradually reduced. Mucilaginous injections are also frequently of service. The drink should consist of cold water, toast-water, gum-water, barley-water, etc.; the diet should be restricted to soda-water-and-milk, arrowroot, cocoa, broths, ripe grapes, and other liquid forms of food—all cold. Animal food and stimulants should be avoided; when recovery has considerably advanced, and in chronic cases, beef tea and other animal broths may be taken.

Preventive Measures.—Besides avoidance of the conditions pointed out under "Causes," it is necessary promptly to remove, disinfect, and bury the evacuations from a dysenteric patient, and to adopt the "Accessory" and "Precautionary Measures" pointed out under "Enteric Fever," p. 83.

Hernia—Rupture.

Definition.—A protrusion of some portion of the intestines through the walls of the abdomen, causing a swelling.

Varieties.—The following are the most common:—Umbilical Hernia makes its appearance at the navel, usually in infantile life; inguinal, in the groin; femoral, also in the groin, but a little lower than the inguinal region; and scrotal, in the scrotum. Reducible Hernia is one that can be returned into the abdomen; irreducible, cannot be returned; strangulated, is so constricted that the contents of the bowel cannot pass onwards, and the circulation of blood is impeded.

Symptoms of Strangulated Hernia.—A painful, tense, and incompressible swelling; flatulence, and colicky pains, with vomiting; obstruction; desire to go to stool, and inability to pass anything, unless there be fæcal matter in the bowel below the seat of rupture. If relief be not obtained, Inflammation sets in, with vomiting, even of feculent matter, extreme pain, small wiry pulse, etc.; and, finally, mortification, with cessation of pain, and death.

Causes.—Weakness of the abdominal walls from disease, injury, or congenital deficiency; violent exertion, as in lifting; immoderate straining, as in passing urine through a stricture, or in relieving the bowels.

Treatment.—No time should be lost in trying to push the tumor back into the abdomen, gentle force being exerted

chiefly upwards and outwards as the patient lies with the hips raised, and the thigh on the ruptured side flexed. A copious injection of tepid water the author has known to be successful in cases which assumed a serious aspect, the escape of the water from the bowel being rapidly followed by return of the rupture. But if not successful, the patient should be laid on a board, so placed as to form a steep inclined plane, so that the patient's feet and hips are very much higher than his head; he should be firmly held in this posture by an assistant, when, by pressure on the swelling, and often without any, the bowels will fall towards the chest, drawing with them the constricted portion. A gurgling sound will be the signal of success. After returning the Hernia a truss should be employed, the pad of which should be of an oval shape, to exert a sufficient amount of pressure to prevent the subsequent protrusion. A truss should be worn constantly during the daytime, and applied before rising from the horizontal posture. The skin of the part on which it presses should be washed daily, and for the first few weeks bathed with *Eau de-Cologne* or spirit-and-water, to prevent excoriation and the formation of boils.

If the rupture resist the measures just recommended, the best surgeon within reach should be immediately sent for, as an operation may be necessary to save the life of the patient. In the meantime Acon. and Nux V. should be administered every fifteen or twenty minutes in alternation.

Diarrhœa—Purging.

Definition.—Frequent, excessive, fluid evacuations from the bowels, without tormina or straining, from functional or structural changes in the small intestines, of a local or constitutional origin.

Simple frequency of evacuation may exist while there may be no increase in the quantity of fæcal matter discharged, or it may even be deficient. True Diarrhœa depends upon defective absorption of the intestines, so that an excess of matter passes through them, and less is taken up for the nourishment of the body.

Forms.—The following are the chief: Irritative Diarrhœa

from excessive, stimulating, irritating, or impure food or drink; Congestive or Inflammatory Diarrhœa, from cold, cold drinks, or ices when the body is overheated, checked perspiration, or suppressed accustomed discharges; Diarrhœa lienterica, or discharges of unaltered food from arrest of the digestive and assimilative functions; and Summer-diarrhœa.

Symptoms.—Nausea, flatulence, griping pain in the bowels; followed by loose motions, which may vary as regards consistence —being fluid or watery; in their nature—slimy, bilious, or bloody; and in their odor and color. Furred tongue, foul breath, and acrid eructations, are generally superadded. The circulation, breathing, and other functions are usually unaffected. In Summer-diarrhœa, or English Cholera, the discharges are chiefly bilious, and there are often violent pains in the abdomen, Cramp in the legs, and great prostration.

Causes.—1. *Excess in the Pleasures of the Table.*—Over-repletion of the stomach may occasion irritation and Diarrhœa by the mere quantity of the aliment introduced, but these results more commonly follow the mixture of various kinds of food and drink in one meal.

1. *Indigestible Kinds of Food.*—Such are, especially,—sour, unripe or decaying fruits or vegetables; badly-cooked food; fatty and rich food; various kinds of shell-fish, putrid or diseased animal food. Numerous proofs have been often furnished in the public journals that the flesh of diseased animals is extensively sold for human food.

3. *Impure Water.*—This is a fruitful cause of Diarrhœa. Water contaminated with sewage or sewage gases, or with decomposing animal matter, is almost certain to occasion Diarrhœa, especially in recent visitors to a neighborhood supplied with such water.

4. *Atmospheric Influences.*—The heat of summer, the hot days but chilly nights and mornings of autumn, are frequent exciting causes of Diarrhœa; so is the application of cold to the perspiring body, or the sudden checking of perspiration. Hot weather is a frequent exciting cause of Diarrhœa, termed, on this account, Summer Cholera. Probably, to the influence of the change of temperature—from the excessive heat of the day to the

cool of the evening in the autumnal months—may be added that of bad drainage, and the impurities which then exist in our rivers and springs.

5. *Mental Emotions.*—The depressing influences of fear or anxiety, or the violent excitement of anger, are frequent exciting causes. "A sudden fright," writes Sir Thomas Watson, "excites in many persons the action of the bowels as certainly as, and much more quickly than, a black draught."

6. *Functional or Organic Disease.*—Diarrhœa is often a symptom of other diseases arising from local or constitutional causes, as in Enteric fever; and in Hectic fever, and in Phthisis, when it is called colliquative Diarrhœa, because it appears to melt down the substance of the body; cachectic Diarrhœa, as from chronic malarious diseases; bilious Diarrhœa, from excessive flow of bile, as in hot weather or after passing a gall-stone. Looseness of the bowels is a very common precursor of Cholera, when that disease is epidemic.

Treatment.—The attempt to arrest Diarrhœa by the astringent measures of the old school has, in many ways, a most prejudicial effect; for should one symptom be relieved, it is too frequently followed by aggravation of others. When loose evacuations afford relief, they should not be interfered with, for they may be Nature's mode of curing disease. The evacuations following the too free indulgence of the table, or those of children during teething, are of this class.

Leading Indications.—*Camphor.*—In sudden and recent cases, with chilliness, shivering, cold creeping of the skin, severe pain in the stomach and bowels, cold face and hands. Two drops on a small piece of loaf sugar, repeated every twenty or thirty minutes, for three or four times. If this remedy acts at all, it does so promptly, and no good follows its continued use.

Dulcamara.—Diarrhœa from cold and wet, particularly in the summer or autumn; nocturnal evacuations, which are slimy or bilious; impaired appetite and dejection of spirits.

Pulsatilla.—Purging from fatty or rich food, bitter taste in the mouth, nausea, eructations, and colicky pains, especially at night; mucous Diarrhœa, especially in children.

Ant.-Crud.—Watery Diarrhœa, with disordered stomach, loss

of appetite, white-coated tongue, eructations, and nausea. It is more especially adapted to the aged.

China.—Simple summer Diarrhœa; also after eating, or in the night, or early morning, and containing undigested food, painless or with Colic; brownish motions; debility; thirst, and loss of appetite.

Apis.—Painless, greenish-yellow Diarrhœa, recurring every morning.

Iris Versicolor.—English Cholera or Summer-diarrhœa; bilious evacuations, with vomiting and Headache.

Arsenicum.—Diarrhœa accompanied or ushered in by vomiting, with heat in the stomach, and a burning sensation attending the effort of expelling the motions, with griping or tearing pains in the abdomen. It is well indicated in Diarrhœa with extreme weakness, emaciation, coldness of the extremities, pallor, sunken cheeks, etc. It is therefore more suited to Diarrhœa associated with deep-seated disease than to mere functional disorder.

Mercurius Cor.—Bilious or bloody stools, preceded by colic and griping, and followed by painful straining; also clay-colored or yellow stools.

Bryonia.—Diarrhœa during the heat of summer, especially if caused by cold drinks, or by sudden change from heat to cold wind.

Podophyllum.—Dysenteric and bilious Diarrhœa, with prolapse of the bowel.

Aloes.—Diarrhœa, with feeling of uncertainity as to the power of retaining the contents of the bowel.

Veratrum.—Copious, dark, watery evacuations, with Cramps, great thirst, vomiting, coldness of the body, and rapid sinking.

Acid.-Phos.—Chronic, exhausting, painless Diarrhœa, particularly when there is involuntary action of the bowels.

Phosphorus.—Weakly, nervous patients, especially young persons with a tendency to Phthisis. Iodium is also valuable.

Ferrum.—Anæmic patients; chronic Diarrhœa, with undigested food.

Calcarea Carb.—Chronic Diarrhœa, with weakness, emaciation, pale face, and sometimes variable appetite. It is especially useful in scrofulous persons.

Diet.—In recent cases of Diarrhœa, food should be given sparingly, consisting of light, non-irritating articles—gruel, rice, arrowroot, arrowroot biscuits, Neave's Food prepared with an extra quantity of milk, and other farinaceous substances, which should be taken cool. In chronic Diarrhœa, the diet should be nutritious, but restricted to the most digestible kinds of food—mutton, chicken, pigeon, game, and white fish are generally suitable, if not over-cooked. Beef, pork, and veal, and all tough portions of meat, should be avoided. Starchy foods—arrowroot, sago, etc.—are insufficient for prolonged cases of Diarrhœa, but are improved by admixture with good milk. Old rice, well cooked, with milk, taken directly it is prepared, is excellent nourishment. Raw or half-cooked eggs, and wholesome ripe fruit in moderation, may generally be taken. Mucilaginous drinks—barely water, gum-water, lemonade, linseed tea, etc.—are the most suitable. Probably, however, the best diet is milk-and-lime-water; it may be iced in feverish conditions, and soda-water occasionally substituted for lime-water. Restricting a patient entirely to this diet is often alone sufficient to cure all kinds of Diarrhœa not depending on a permanent chronic cause. Even in the latter case much temporary benefit is gained. The alkaline milk diet may be taken frequently and in small quantities.

Accessory Means.—The extremities should be kept warm, and exposure to cold or wet avoided. Rest, in the recumbent posture is desirable in acute cases. Severe griping pains may be relieved by heated flannel applied to the abdomen, dry, or wrung out of hot water. A roll of flannel, fitting moderately tight around the abdomen, is very comforting, and hastens the cure. Persons liable to Diarrhœa should always wear flannel abdominal-belts. Night air and late hours predispose to attacks.

In severe cases, moderate out-of-door exercise should be taken daily. On recovery from Diarrhœa, relapses should be guarded against by shunning all exciting causes in food, clothing, etc.; mental excitement, and excessive or prolonged exertion, should also be avoided.

Colic—Spasms of the Bowel.

Definition.—Violent contraction of the muscular fibres of the large intestine.

Symptoms.—Severe twisting griping pain in the abdomen, chiefly around the navel, relieved by pressure, so that the patient doubles himself up, lies on his belly, or rolls on the floor, writhing in agony. The bowels are generally constipated, but there is a frequent desire to relieve them, although little passes but flatus; there is no fever, nor is the pulse even quickened, unless after a time it becomes so from anxiety. The paroxysms of pain are owing to the efforts of the bowel above to force downwards the mass of accumulated gas or fæces, while the lower portion is contracted.

Diagnosis.—Colic is sometimes mistaken for Enteritis, and for Hernia; but it may be distinguished as follows:—In Colic, there is no fever, no acceleration of the pulse, no serious apprehensive anxiety, the pain is relieved by pressure, and there are intervals of almost complete relief. Enteritis, on the other hand, is attended with fever and extreme tenderness of the abdomen, causing the patient to avoid any movement which would bring into action the abdominal muscles, so that he breathes by the chest alone; and although there are paroxysms of severe pain, there are no complete intermissions. Colic may be distinguished from Hernia by the tumor which exists in the latter disease, but which is absent in the former.

Causes.—Errors of diet, such as eating a mass of heterogeneous, acrid, indigestible food, or acid fruits; Cold, from wet feet or suppressed perspiration; worms; Constipation, etc. It may also arise from Stricture of the intestines.

Treatment.—*Colocynth.*—Cutting, griping, or intermittent pains, extremely severe, with flatulence or Diarrhœa, followed by tenesmus.

Chamomilla.—In women and children; pinching and twisting pain; soreness of the bowels; nausea.

Nux Vomica.—Spasmodic flatulent Colic, with pain as if the bowels and bladder were pressed upon with a cutting instrument; irregularity in the action of the bowels. Also to correct the tendency to recurrence.

Iris Versicolor.—Severe flatulent Colic. Colic often yields to this remedy after Nux V., Coloc., Cham., etc., have failed.

Belladonna.—Paroxysmal Colic, griping, and sensation as if a

ball or lump were forming; there may be distention of some part of the abdomen; redness of face, with straining, especially in children.

Plumbum.—Violent constrictive shooting or pinching pains in the region of the navel; constant desire to eructate and expel flatus; torpor, numbness, stiffness, and weakness in the limbs; hard abdomen; pressure and cramps in the stomach; relief by bending the body and drawing up the knees; flatulence and obstinate Constipation; with stools formed like sheep's dung; face and skin pale, bluish, or yellow; cold extremities, melancholy, etc.

Veratrum.—Severe crampy pains, with coldness of the whole body; flatulent Colic, especially in the night; Colic affecting the whole abdomen, with swelling and loud rumbling.

Bryonia.—In less severe Colic when, in addition to fullness and distention of the bowels, there are sharp stitching pains in the sides or in the bowels, with irascibility.

Other remedies sometimes required are—Cocc. (menstrual Colic); Merc., Ipec., or Podoph. (bilious Colic); Diosc. (sudden attacks, with vomiting of food); Puls., Collin. Some time ago we prescribed the last-named remedy with striking and permanent results in an extremely severe and obstinate case, which had resisted nearly all the usual remedies. For Lead-Colic, see the next Section.

Accessory Means.—Hot flannels over the abdomen; or a copious enema of warm water, is often followed by immediate relief. Food of a flatulent character, especially vegetables, and every kind that has been found to disagree with the patient, should be avoided. Persons subject to Colic may be benefited by wearing a piece of flannel around the abdomen, and having the feet well protected from dampness.

Lead Colic.

Causes.—All the preparations of lead do not equally favor the development of Colic, the oxide of lead and white-lead being especially apt to induce it. The most dangerous modes by which lead is introduced into the system are its absorption by the respiratory apparatus, as by the continued inhalation of the dust

or vapor of lead by workmen, and by taking food with hands soiled with that form of the poison they are in the habit of using; this explains why workers in lead-mines, and in white-lead factories, painters, potters, type-makers, and others, are particularly liable to Lead-colic. Less frequent causes are—indulgence in snuff wrapped in tinfoil, wine sweetened by sugar-of-lead, the preparation of food in leaden vessels, or in vessels badly glazed, and water contaminated by passing through leaden pipes.

Lead-colic has also been observed in cows feeding on the fields in the neighborhood of the Scottish lead-mines, and in animals drinking water from rivers which originate in lead-mines.

Treatment.—Opi., Alum., Bell., Plat., Podoph., or Ac.-Sulph. For detailed treatment, see the Chapter on Poisons.

Prevention.—As a prophylactic measure, and a *conditio sine qua non* of complete recovery, change of occupation is necessary. It is important to observe that some persons are much more readily affected than others, and if one member of a family suffers from Anæmia, nervousness, and debility of the upper extremities, while the others are in apparent health, the blue line on the gums should be looked for, and the condition of the water-supply, and other possible means of lead-poisoning, carefully inquired into.

Constipation—Confined Bowels.

Definition.—A collection or impaction of excrement in the rectum—the residuum of the various processes concerned in the nourishment of the body—occasioning irregularity in the evacuations from the bowel, increase in their consistence, and often a sensation of fullness and tension in the bowel and surrounding parts.

Constipation and Purgatives.—While we admit that Constipation is not desirable, and may almost invariably be avoided by such measures as are pointed out further on, yet a tendency thereto is not so prejudicial as many persons suppose; indeed, persons thus predisposed are generally long-lived, unless they injure themselves by purgative medicines; while those who are subject to frequent attacks of Diarrhœa are soon debilitated. A daily action of the bowels is no doubt desirable in most cases, but by no means invariably so. An evacuation may take place daily,

or every second day, or even every third day, in persons who are equally healthy, no invariable rule applying to all persons. The most erroneous and dangerous idea on this subject is that extremely popular one,—that aperient drugs contribute to health, not only during sickness, but also occasionally in health, inasmuch as impurities are thereby expelled from the body. The fallacy of this may be easily demonstrated: Let purgatives be taken for a week, and however good may have been the health previously, at the termination of this period very much "impurity" will be discharged, especially after taking jalap and calomel.

Aperients during sickness are also most injurious: while "temporary relief is afforded by powerful purgatives, the delicate mucous membrane of the intestinal tract is weakened thereby, a sort of chronic Catarrh is induced, and the very condition sought to be removed is aggravated tenfold" (*Habershon*).

Purgation produced by drugs is an unnatural condition, and although temporary relief often follows the use of aperients, they tend to disorganize the parts on which their force is chiefly expended. The intestinal canal is not a smooth, hard tube, through which can be forced whatever it contains without injury; it is part of a living organism, and needs no force to propel its contents on their way; nor can such force be applied with impunity. Not only does the frequent use of purgatives over-stimulate the liver and pancreas, but also and especially the numerous secretory glands which cover the extensive surface of the intestinal canal, forcing them to pour out their contents in such excessive quantities as permanently to weaken and impair their functions, and so produce a state of general debility. The normal action of the stomach and intestinal canal being thus suspended, nausea, vomiting, griping, and even fainting are produced. The brain and vital energies are disturbed, occasioning lowness of spirits with Melancholy, alternating with mental excitement and peculiar irritability of temper.

An important end will be gained when persons can be led to regard Constipation as a mere result of other causes—a want of balance in the general system; and when general and remedial measures shall be directed to the correcting of this condition as the only adequate means of curing Constipation.

Constipation in Old Age.—Daily evacuation, which is the rule in youth and middle life, is often an excess in advanced life, when three or four times a week is sufficient. It is desirable that this physiological fact should be known, as old persons often trouble themselves needlessly on this point. If Constipation gives rise to any inconvenience in the aged, it is best met by oleaginous articles of diet—butter, fat bacon, etc., which should be taken as largely as can be digested.

Symptoms.—Headache; feverishness; pressure or distention in the stomach and bowels; urging and repeated but fruitless efforts to evacuate the contents of the bowel, or complete torpor without desire; pulsation or pain in the abdomen; Piles and Varicose veins; uneasy breathing, disturbed sleep; depression of mind; etc. If constipation be persistent, it may be attended with vomiting.

Causes.—In most instances, Constipation depends upon some faulty habit in the patient, the regulation of which will probably in every case suffice to remove this condition. The following are a few of the faults in question. Sedentary habits; smoking tobacco; drinking too much beer, port wine or tea; dissipation; the exclusive use of superfine flour; taking food too dry and too destitute of succulent vegetables; neglect in attending to the calls of nature to relieve the bowels; loss of tone in the mucous lining of the bowels from the use of purgatives. Sometimes Constipation is the result of disease in other parts—disease of the liver, brain, or spinal cord, or their membranes. Here, again, the remedy must be directed to the cure of the disease, if that be possible, rather than to the simple removal of one of the symptoms to which it gives rise.

Treatment.—The following remedies, it should be distinctly borne in mind, are not intended merely to "act upon the bowels," but to correct the derangement upon which the Constipation depends.

Leading Indications.—*Nux Vomica.*—Constipation occurring in connection with other affections; habitual Constipation, with frequent ineffectual efforts to stool; also with nausea, congestive Headache, ill-humor, and uneasy sleep. It is especially useful when the affection is consequent on Indigestion, the use of alcohol, tobacco, or coffee; for persons who take too little open-air exercise; and for students and literary men.

Bryonia.—Chilliness; throbbing Headache; pain in the region of the liver; also in persons having a tendency to Rheumatism; and when there is no inclination to stool.

Opium.—Complete torpor of the bowels, especially after unsuccessful remedies, and when the motions are hard and lumpy, with Headache, drowsiness, dizziness, congested face, and retention of urine. Opium is well adapted to the aged, and to persons of a torpid or plethoric temperament, who do not readily respond to other remedies.

Lycopodium.—Rumbling and flatulence; full, distended abdomen; Heartburn; water-brash; difficult evacuations.

Hydrastis.—Simple chronic Constipation. Hydras. gives tone locally and generally.

Plumbum.—Obstinate cases, as from palsy of the intestines, either painless, or with severe Colic; unsuccessful efforts to evacuate, with a painful, constricted feeling about the anus; the motions are dark, and passed in small balls. For persons of a paralytic diathesis it is strongly indicated.

Ignatia.—Constipation with Prolapsus of the rectum on slight efforts to evacuate; creeping, itching sensation in the rectum, as of thread-worms.

Veratrum Alb.—A paralyzed state of the rectum, with dryness of the bowels.

Nat.-Mur.—With despairing mood, dryness and soreness of mouth, slight Ulcerations of the tongue.

Sulphur.—Habitual Costiveness, with flatulent distention of the abdomen, Piles, etc. As an intercurrent remedy it acts like Opium, but having a wider sphere, and being useful in numerous forms of disease, it is of far greater value.

Aconitum.—Constipation during acute disease.

Diet and Accessory Measures.—Meals should be taken with regularity, animal food eaten sparingly, but vegetables and ripe fruits freely. Coarse oatmeal porridge, with treacle, may be taken for breakfast; and brown bread should always be preferred to white. If brown bread be not eaten exclusively, a little should be taken with nearly every meal; its effects will thus be more uniformly exerted through the alimentary canal than if only taken occasionally. Water is an extremely valuable adjunct, both as a beverage and for external use. For tea and coffee, cocoa from

the nibs may be substituted with great advantage. Spirituous liquors, highly-seasoned food, and late suppers, should be strictly avoided.

Walking-exercise in the country, with the mind unencumbered, is useful, particularly in the morning; but it should not be carried to the point of inducing fatigue or much perspiration. Frictions over the abdomen, by towels, horsehair gloves, or the hands, are frequently of great utility; they tend to rouse the paralyzed action of the bowels, and to dispel accumulations of flatulence.

The Abdominal Compress is extremely valuable in correcting Constipation, and in obstinate cases may be worn day and night. It should not be used by aged and weakly persons, in whom there does not exist vital energy sufficient to excite reaction, or when the wet linen continues to feel cold long after it has been applied. In other cases the chill produced by the sudden application of the wet cloth rapidly disappears, and in from five to ten minutes a comfortable warmth results, proving its suitability to the patient.

Regular Hour.—Regularity in attending to the calls of nature should be observed, as there is probably no function of the animal economy more completely under the influence of habit than the one in question; nor is there any that may be more effectually deranged through the influence which the will can oppose to it. By fixing the mind on this operation for a short time, the bowels will at length respond, and a habit become established which will tend to procure both comfort and health.

Injections.—In obstinate, protracted Constipation attended with feverishness, and hardness or fullness of the bowels, and when it is ascertained that the lower bowel is obstructed with fæcal matter, too large or too hard for discharge, and the means before suggested have not proved at once effectual, the Enema may be used as an almost certain means of obtaining temporary relief. The injection should consist of about a pint of tepid water, which should be carefully and slowly injected up the rectum by means of the Fountain syringe. Unirritating in its operation, and acting directly on the seat of obstruction, an injection is far preferable to deranging the whole alimentary tract with strong drugs, which excite violent action only to reduce it to a state of greater debility and torpor than existed before.

Fistula in Ano.

Definition.—A Fistula in ano is a narrow pipe-like track, lined by an imperfect mucous membrane, secreting pus, having a narrow callous opening, situate within a short distance of the verge of the anus.

Varieties.—(1) The complete Fistula communicates at one extremity with the interior of the rectum, and at the other opens through the skin, and is most common. (2) The blind external Fistula only opens through the skin, and does not admit of the penetration of a probe into the interior of the bowel. (3) The blind internal Fistula is not so readily detected, but is indicated by pain at stool, and discharge of blood and pus with the fæces; it may also be detected by a finger or probe, or seen by a speculum, about an inch to an inch-and-a-half within the rectum.

Causes.—Fistulæ originate in Abcesses, which are prevented from healing by the movement of the sphincter ani and the bowel itself; or by the ulceration of the mucous membrane of the rectum, and generation of feculent fluid and gases, which gradually excite progressive ulceration towards the surface. The disease is frequent in consumptive patients, probably from deposit of tubercle under the mucous membrane of the rectum, or from the areolar tissue about the rectum losing its fat, and falling into a watery, unhealthy condition.

Symptoms.—There first appears on one side of the rectum a small hard lump, which, as it continues to enlarge, occasions considerable pain, and not unfrequently much constitutional disturbance. The surrounding parts soon become much swollen, the skin red, and suppuration quickly follows. During the formation of the Abscess, the patient complains of pain in passing his motions, which are sometimes slightly tinged with blood. Great relief follows the discharge of the Abscess, which is generally most offensive, and the swelling subsides; but there still remains a small opening near the anus, and upon pressure, a hardened track may be felt, leading towards the bowel. This is the Fistula. The external orifice of the Fistula is often very small and difficult to find in the folds of the thin skin near the anus, and is sometimes concealed by a papilla.

Treatment.—The administration of one or more remedies will aid the cure of Fistula, and in many cases, as we have found in practice, renders the usual severe operation unnecessary. Several bad cases, previously under the care of allopathic surgeons, by whom operations were said to be absolutely necessary, we have completely cured by such remedies and measures as are here prescribed. In one case it was arranged for a London surgeon to operate, but as it was inconvenient for the patient to leave his engagements for some weeks, we were requested to undertake the case in the meantime, and when the period for the operation arrived it was no longer necessary. This is now eight years since, and the patient, whose family remains under our care, has had no return of the Fistula.

The following are the chief medicines, the choice from which must be made according to the general symptoms and condition of the patient:—Sil., Calc.-Phos., Lyc., Caust., Nux V., and Sulph. At the same time, local applications of Hydras. or Calend. are useful to assist the curative process.

Accessory Means.—The early opening of any swelling which indicates the presence of an abscess in the vicinity of the anus. A poultice before and after the incision may be necessary. Subsequently, frequent washings with tepid water; the sitz-bath; and injections as directed in the following Section, afford comfort to the patient, prevent the extension of the disease, and favor a radical cure. Nourishing, digestible diet, abundance of fresh air, and general good hygienic conditions, are necessary to increase the reparative powers of the system.

Hæmorrhoids—Piles.

Definition.—Small tumors, consisting of folds of mucous and sub-mucous tissue, in different stages of congestion, inflammation, or permanent enlargement, situated within or just outside the anal aperture, and originating in dilatation of the hæmorrhoidal veins.

Piles are of a pink or purplish hue, forming one or more distinct pendulous tumors, varying from the size of a pea to that of a damson or walnut, are often intensely painful, and constitute the most frequent disease of the anus. They are seated in the

vertical folds of the mucous membrane which lines the bowel; that portion of membrane which invests them being extremely vascular, numerous minute vessels of brighter color than the body of the Piles may be seen ramifying on the surface.

Varieties.—Piles are classified as (*a*) internal and (*b*) external, according as they are situated within or without the sphincter. The external are covered by skin; they vary in number from one to several clustering together like a bunch of grapes. The internal are covered by mucous membrane, and are always within the bowel; they are very liable to bleed, especially during the passage of fæces. The blood thus lost is of a bright-red color (being arterial), proceeds from the capillaries of the vascular surface of the Tumors, and varies in quantity from a few drops to such a profuse discharge as to be truly alarming; if Hæmorrhage be long continued, an anæmic condition is induced that is highly prejudicial to the constitution.

Piles that do not bleed are called blind; this variety is prone to inflammation, when they become tense, appear ready to burst, and are so excessively sensitive that the patient can scarcely sit, walk, or lie.

Symptoms.—These vary considerably according to the amount of inflammation present. When the Piles are indolent, the chief inconvenience arises from their bulk and situation; or from their getting within the sphincter muscle, occasioning more or less pain when the bowel is acting, prolapse, and often a sense of weight and discomfort which quite unfits the mind for continuous thought. But when inflamed, or, in common language, "during a fit of the Piles," there are pricking, itching, shooting, or burning pains about the anus, increased on going to stool, and a feeling as if there were a foreign substance in the rectum. After emptying the bowel, there is often painful straining, as if it were not emptied, occasioned by the Piles or the elongated mucous membrane to which they are attached being protruded during the expulsion of fæces, and, not being replaced sufficiently quick, are grasped and constricted by the sphincter ani, the function of which is to close the aperture of the bowel after defæcation. This condition is greatly aggravated if the patient stand or walk much after going to stool, or if the bowels are constipated, so

that the rectum is much distended or the fæces become hard. If proper remedial measures be not adopted, the inconvenience and suffering become seriously augmented, the general health implicated, the patient loses flesh and strength, and the countenance wears a careworn expression.

Causes.—The predisposing causes are—a general plethoric condition of the system, or any circumstances which determine blood to, or impede its return from, the rectum; such are sedentary habits; luxurious living, especially the use of highly-seasoned food, wines and spirits; tight-lacing; pregnancy; confined bowels; and diseases of the liver. Residence in moist, warm, and relaxing climates; soft, warm beds or cushions, and over-excitement of the sexual organs, may also be classed among predisposing causes. The exciting causes include anything which irritates the lower bowel, such as straining at stool, hard riding, and the use of drastic purgatives, especially Aloes and Rhubarb.

Probably the most potent causes of this disease are the indolent and luxurious habits of the wealthy, which by diminishing tone, occasion plethora and a tendency to abdominal Congestion. Accordingly we find Piles much more prevalent among the wealthy than among the industrial and frugal classes.

Age and sex appear to exercise considerable influence on this disease. In early life, it is probably much more frequent in young men than in young women. The comparative exemption of young women is readily accounted for by the regular action of the catamenial function, which probably obviates congestion that might otherwise occur. At a later period, after the cessation of the menses, or during the pressure of the gravid uterus in pregnancy, Congestion is apt to occur in certain neighboring organs, and so give rise to Piles.

Treatment—Leading Indications.—*Nux Vomica.*—Piles in patients of sedentary habits, or from luxurious living, indulgence in stimulants, or depressing mental emotions; Constipation, with ineffectual urging; Prolapsus, or loss of power of the muscular structure of the bowel. Sulph. may advantageously follow this remedy, a dose being given morning and night for four or five days; or Sulph. and Nux V. may be given in alternation, the former in the morning and the latter at night.

Hamamelis.—Bleeding-piles, or only a varicose condition of the hæmorrhoidal veins, particularly with a varicose state of the veins of the lower extremities. For cases in which there is considerable loss of blood, it should be used both internally and externally, a lotion being made by adding thirty drops of the strong tincture to four ounces of water, and applied by means of two or three folds of linen, covered with oiled silk, and renewed several times daily.

Æsculus.—Bleeding-piles, with much pain in the rectum, and also in the back and loins.

Collinsonia.—Piles associated with Constipation.

Aconitum.—An inflamed condition, with feverish restlessness, a sensation of heat, and discharge of mucus or blood. For the excessive pain often associated with Piles, besides its internal use, Acon. may be used as a lotion.

Arsenicum.—Burning sensation, and sometimes a feeling compared to passing red-hot needles through the Piles, with intolerable pain in the back, protrusion of the Tumors, and prostration of strength

Sulphur.—This remedy is justly regarded as one of the most valuable in every variety of Piles, especially in chronic cases, occurring in scrofulous individuals, and associated with Constipation, or thin evacuations mixed with blood.

Diet and Accessory Means.—Patients should avoid coffee, pepper, spices, stimulating, highly-seasoned or indigestible food of every kind, and the habitual use of beer, wine, and spirits. Light animal food, a liberal quantity of well-cooked vegetables, and ripe and wholesome fruits, form the most suitable diet. During an attack of Piles, animal food should be sparingly used. Over-eating or drinking causes engorgement of the portal vein, and Piles are the common result. The application of this remark is self-evident.

Sedentary habits and much standing, on the one hand, and extreme fatigue on the other, are prejudicial; as also is the use of cushions and feather beds. The pain attending Blind-piles may be relieved by ablution in cold or tepid water, whichever is found more agreeable. Bleeding-piles may be relieved by drinking half a tumbler of cold water, and then lying down for an hour. The

horizontal position should be maintained as much as possible, that being most favorable to recovery. When Piles protrude, the use of petroleum-soap is recommended.

Injections.—Great relief and permanent benefit will also follow an occasional injection of about a pint of tepid water up the lower bowel. This acts beneficially, by constricting the blood-vessels, softening the fæces before evacuation, and by giving tone to the relaxed structures. Injections of water are also of service after each evacuation, when any feculent matter remains; at the same time the application of water exercises a most favorable influence on the blood-vessels and nerves of the bowels. As a rule, tepid injections are most suitable for patients of a full habit of body, and cool ones for those of relaxed constitutions.

When Piles are excessively sensitive or painful, the patient should sit over the steam of hot water, keep his bed or recline during a great part of the day on a couch. Strict cleanliness is also essential. The parts should be frequently washed with soap and cold water; or, when the Tumors are inflamed and painful, with tepid water. A piece of sponge and tepid water should in such cases be substituted for paper. A warm or vapor-bath may be occasionally used at night, when the liver is inactive and the skin dry and harsh. It should be followed in the morning with a tepid bath, or the body should be rapidly rubbed, first with a wet towel, and then with a dry one.

The Abdominal Compress is strongly recommended as preventive of Piles, and should be adopted directly the first symptoms are felt; also as a curative measure in connection with others pointed out.

Another important point for patients troubled with Piles is, that the habit should be acquired of going to stool at night, immediately before retiring to bed, instead of morning, so that the horizontal position may favor the early subsidence of the Tumor, instead of its remaining in an inflamed and prolapsed condition, to the great annoyance and distress of the patient, and to the permanent injury of the parts.

Surgical measures are sometimes necessary; but, happily, these are rarely required under homœopathic treatment, the most inveterate cases generally yielding to our prescriptions without the use of the knife, the ligature, or Nitric Acid.

Pruritus Ani—Itching of the Anus.

Definition.—A peculiar itching of the anus, at first of a voluptuous character, but afterwards violent and almost unbearable.

Symptoms.—Crawling, tingling, irritating sensations about the anus, often most troublesome at night, as the patient gets warm in bed, and preventing sleep. It is frequently complicated with an excoriated or fissured condition of the anus.

Causes.—Irritation of Piles; Worms; Pediculi; habitual taking of opium or chloral; lodgment of fæces; suppressed period, or any suddenly-suppressed discharge or cutaneous eruption. Frequently, itching of the anus is only a symptom of disease of the liver, of some portion of the digestive apparatus, especially the rectum, or of some part in immediate proximity thereto. The primary cause must, therefore, be obviated.

Treatment.—Sulph., Ac.-Nit., Lyc., Ant.-C., Ars. The selection of the remedy must be guided by the cause of the affection and by the symptoms present. The local use of dilute Carbolic Acid (five drops to the ounce of water) generally gives great and speedy relief. Dilute Ferri Tinct.; or a lotion of Borax three drachms, dilute Ac.-Hydrocy. one drachm, and rose-water ten ounces have been found useful. See "Piles," "Worms," or "Indgestion."

Prolapsus Ani—Falling of the Bowel.

Definition.—A protrusion of the mucous lining of the rectum through the anal orifice, after the action of the bowel, which goes back of itself, or is easily replaced. In severe cases the protrusion takes place from walking, riding, or even too long standing, and can only be replaced with difficulty. In complicated cases, a portion of the muscular structures of the rectum is protruded with the mucous membrane.

Causes.—Long-continued Constipation or Diarrhœa, purgatives, straining excited by the presence of worms, Stone in the bladder, etc. General laxity of structure may predispose to the complaint, or, at any rate, aggravate the causes already indicated.

Treatment.—*Ignatia*—Is often specific, and is generally the

first to be used, especially for infants and children. The indications are—frequent ineffectual urging to stool, straining, difficult passage of fæces, itching, and Prolapse of the bowel. A dose thrice daily, for two or three days; afterwards, morning and night.

Nux Vomica. — Prolapsus, with costiveness, and straining at stool, for patients of vigorous constitution.

Mercurius.—Prolapsus, with itching, discharge of a yellowish mucus (White Piles), and Diarrhœa; hard, swollen abdomen.

Podophyllum. — Prolapsus accompanying Diarrhœa, with straining and offensive stools; irritation from teething, etc.

Lycopodium.—Obstinate cases, and when other remedies only partially cure.

Sulphur.—For similar conditions.

Gamboge, *Calc. C.*, *Sep.*, *Ars.*, and *Bry.*, are additional remedies.

Accessory Measures.—Two points must be steadily kept in view:—The return of the Prolapse, and the removal of the cause. The protruded part should be replaced with the forefinger, previously lubricated, carrying it beyond the contracting ring or sphincter muscle of the anus. As long as the complaint continues, the patient should lie down for a short time after the action of the bowels, so as to favor the complete return of the protruded part. Bathing the parts, and the body generally, every morning in cold water, and occasional injections of cold water, help to impart tone to the relaxed structures. The diet should be plain and nourishing, and include such varieties of food as favor the healthy action of the bowels. If, as is most frequently the case, Indigestion, Constipation, or Worms cause the complaint, the treatment recommended in the Sections devoted to those disorders should be carried out.

Hepatatis—Inflammation of the Liver.

Acute Inflammation of this organ is not frequent in this country, although it is very common in tropical climates.

Symptoms. — The disease is usually ushered in by rigors, which are quickly followed by hot skin, thirst, and scanty urine; sometimes nausea and vomiting; white or yellow-furred tongue; bitter taste; pain more or less severe in the region of the liver,

aggravated by pressure, deep breathing or coughing, and extending to the top of the right shoulder; fullness, from enlargement of the organ; a yellow tinge of the conjunctivæ, and often a general jaundiced state of the skin; the breathing is short and thoracic, being performed almost entirely by the intercostal muscles; sympathetic Cough and vomiting. The fever sometimes assumes a typhoid character.

The symptoms vary, however, according to the portion of the gland implicated in the inflammatory process. When the disease is in the convex side of the liver, it is accompanied by a burning, stitching pain in the right side, which extends into the chest, under the collar-bone, between the shoulder blades, to the top of the right shoulder, and sometimes down the arm, and is aggravated by external pressure. If the Inflammation be in the inner portion of the liver, there will be the symptoms already indicated,—saffron-colored urine, yellow color of the eyes and skin, etc. If the substance of the gland be involved, the pain is of a dull, tensive character; if the thin serous covering which invests the organ, the pain is sharp and lancinating. Whatever part of the liver is diseased, increased secretion of bile, some degree of Jaundice, dyspnœa, Cough, etc., are present.

Terminations.—1. *Resolution.*—This is indicated by an amelioration of the febrile symptoms, copious perspiration, and an abundant deposit in the urine. 2. *Abscess.*—Matter forms, sometimes enclosed in a cyst, at other times diffused, the patient experiencing throbbing, pulsating sensations in the part, with the general symptoms of Hectic fever, the abscess discharging itself into the stomach, duodenum, or colon, or externally by perforation of the chest or abdominal wall. 3. *Enlargement.*—(See next Section.)

Causes.—In India the disease is most frequent, from the climate and diet not suiting European constitutions, and is seated in the substance of the liver: in this country it arises from Cold, nervous depression, pregnancy, drunkenness, and other causes, and is then usually seated in the peritoneal covering, resembles Pleuritis, and ends in adhesion to the diaphragm or other adjacent parts.

Epitome of Treatment.—Acon. (fever); Bry. in alternation

with Merc. (after the fever is abated); Hep.-S. (if abscesses form); Coni., Phos., Nux V., Cham.

Accessory Means.—When there is severe pain, the whole of the affected part should be covered with two or three thicknesses of linen, squeezed out after immersion in a lotion of half a drachm of the strong tincture of the root of Aconitum to half a pint of hot water, and covered with oiled silk and flannel.

Simple Enlargement of the Liver — Congestion of the Liver—Liver Complaint.

Symptoms.—Fullness on the right side in the region of the false ribs; sense of weight on assuming the upright posture; uneasy sensation when the part is pressed upon; the complexion may be pale, sallow, or dusky; the tongue coated; the bowels constipated; the appetite faulty; and there may be nausea, Vomiting, headache, languor, lassitude, and depression of spirits. The pulse is usually slow and irregular.

Causes.—Sudden chills; too abundant, highly-seasoned, stimulating diet; the habitual use of alcoholic drinks; anger, or other mental influences; excessive bodily exercise in the heat of the sun. Hepatitis is also an occasional cause. It is a very common disease, and Dr. Budd thus accounts for its frequency: — "Amid the continual excesses at table of persons in the middle and upper classes of society, an immense variety of noxious matters find their way into the portal blood that should never be present in it, and the mischief which this is calculated to produce is enhanced by indolent or sedentary habits. The consequence often is, that the liver becomes habitually gorged. The same, or even worse effects, result in the lower classes of our larger towns, from their inordinate consumption of gin and porter.

Functional derangement, with suppressed secretion, sometimes accompanies congestion of the gland. Dram-drinking often leads to a hard, contracted condition of the liver, called Cirrhosis, or hob-nailed liver, and Dropsy and death ensue.

Treatment — Leading Indications. — *Bryonia.*— Enlargement and hardness of the liver, with shooting, stinging, or burning pains, increased on pressure, and Constipation, without inclination

for stool. Bry. often acts better in such cases when alternated with Merc.

Mercurius.—Dull, pressive pain, which prevents the patient from lying long on the right side; yellow tinge of the "white" of the eyes; sallow skin; shivering followed by profuse clammy perspiration; loss of appetite; foul taste in the mouth; Constipation of the bowels, with white stools; or relaxation, with bilious motions. Merc. is one of the best hepatic medicines in simple cases. But patients who have been dosed largely with Mercury should select Hep.-S., especially when the stools are clay-colored.

Nux Vomica.—Liver-derangement from the use of intoxicating drinks, excessive or stimulating food, sedentary habits, or nervous exhaustion, with Constipation, deep-red urine, etc. Also when associated with Piles: in this case. Sulph. should be alternated with Nux. V.

Lycopodium.—Sometimes required instead of, or after, Nux V., when the latter is insufficient; Constipation with flatulence; continual pain in the right side and back.

Chamomilla.—Bilious attacks in females and children, from exposure to cold, or from anger; nausea or vomiting of bile, yellow-coated tongue, and sometimes bilious Diarrhœa.

Aconitum.—Sudden, acute bilious attacks, following chills, with febrile disturbance threatening Jaundice; generally to be alternated with Merc., unless allopathic doses of Mercury have been given, when China should be substituted.

Podophyllum.—Bilious vomiting, and Diarrhœa, with Prolapsus Ani; bitter taste; dark urine; sallow complexion.

Arsenicum.—Severe and chronic cases, with extreme weakness, burning pain, vomiting, and exhausting Diarrhœa.

Chelidonium Majus.—Chronic Liver-complaint; thick, yellow-coated tongue; nausea; dull headache; deep-yellow and thick urine; pain and fullness; constipated bowels.

Ac.-Nit. or *Phosphorus.*—Long-continued, obstinate cases, with Jaundice, more especially if there be reason to fear organic disease of the liver; the former if there be Dropsy; the latter if there be fatty degeneration, Cirrhosis, etc.

Accessory and Preventive Means.—Rest and change are most valuable, both as means of cure and prevention. The burden

of business and domestic cares should be removed for a time, and the monotonous scenes of every-day life exchanged for the hill-top and wild moorland; or at least the long hours of mental and physical exhaustion should be abridged, and more time allowed for the daily renewal of nervous energy. The patient should strictly avoid everything mentioned in a foregoing paragraph as "Causes," for wrong habits will render a cure impossible; on the other hand, self-denial, abstinence, and correct habits, in conjunction with the medicinal treatment pointed out, will generally insure the most gratifying results.

To residents in tropical climates, the foregoing remarks on diet and stimulants are especially appropriate. The food should be properly cooked, and the quantity taken should be proportioned to the amount of physical work and exercise.

The Abdominal Compress is a most valuable adjunct in all liver affections; a cold salt-bath should also be used daily. Riding on horseback in the evening is beneficial; so also are Saratoga waters.

Jaundice—The Yellows.

The above terms are used to express conditions in which many of the tissues and fluids of the body become yellow, especially the whites of the eyes and the connective tissue of the body. Jaundice is often a symptom of some acute or chronic affection of the liver, rather than a disease *per se*.

Symptoms.—Yellow tinge, first of the whites of the eyes, then of the roots of the nails, and next of the face and neck, and finally the trunk and extremities. The urine becomes yellow-colored or deep-brown, and stains the linen; the fæces whitish or drab-colored; there is Constipation; lassitude; anxiety; pain in the stomach; bitter taste; and, generally, febrile symptoms. Sometimes, especially in children, the bowels are relaxed from the food not being properly digested and occasioning irritation. There are also, usually, depression of spirits, prostration of strength, and slowness of the pulse. The presence of the yellow tint in the conjunctivæ and urine is very conclusive that the patient is suffering from Jaundice, and not merely from the sallowness of Anæmia. The addition of nitric acid to the urine

changes it to a deep-green color. When there is obstruction from a gall-stone, the most acute suffering is induced; the pains come on in paroxysms, and are often accompanied by vomiting and hiccough.

Causes.—Jaundice, as pointed out by Dr. Budd, may be produced in two ways:—(1st) By some impediment to the flow of bile into the duodenum, and the consequent absorption of the retained bile; and (2nd) by defective secretion on the part of the liver, so that the constituents of the bile are not separated from the blood.

Derangement in the functions of the liver connected with the secretion of bile, consequent on atmospheric changes, dietetic errors, dissipation, fits of passion, etc., are frequent causes.

The excessive use of Chamomile tea, Quinine, Rhubarb, or Calomel, in some fevers, may also be stated as a cause, as these drugs induce obstruction of the bile duct. Pressure of the enlarged womb in pregnancy, or the growth of tumors, causing obstruction of the gall-ducts, are also occasional causes of Jaundice. But sedentary occupations, mental anxiety, and high living, are probably the most frequent. Cancerous disease of the liver, or of the gall-bladder, are sometimes associated.

Gall-Stones.—A not uncommon impediment to the flow of bile is the impaction of a gall-stone in the natural channels of the bile. A gall-stone consists of bile in a crystalline form, the solvent properties having been released. The pain attending the passage of gall-stones is very severe, commences suddenly, is constant for a time, and terminates suddenly, and is thus distinguished from Colic, and by the pains being of a more local character, and in the site of the gall-duct.

Treatment—Leading Indications.—*Aconitum.*—Jaundice, with symptoms of Inflammation, and great pain in the region of the liver.

Mercurius.—A valuable remedy, and often effects a speedy cure; it is especially useful after Acon.

China.—Jaundice from marsh miasmatic influences; with bilious Diarrhœa; and when the disease is intermittent. Persistently used, it prevents the recurrence of gall-stones.

Nux Vomica.—Jaundice with costiveness, sensitiveness in the

region of the liver, or from sedentary habits, or indulgence in stimulants.

Chelidonium Maj.—Jaundice, with pain or tenderness in the liver and right shoulder, deep-red, clean tongue, bitter-taste; light-colored, formed stools, etc.

Phosphorus.—Brownish-yellow skin and conjunctivæ; frequent copious, whitish-grey evacuations, blackish brown urine; dejection and despondency; sometimes loss of voice, Cough, and other symptoms of malignant Jaundice.

Arsenicum.—Malignant cases, with typhoid symptoms, or great emaciation. Ars. is also useful for the Dyspepsia following an acute attack; for Jaundice from the free use of Mercury, and for obstinate cases from Fever and Ague.

Jaundice during pregnancy, or from Cancer or other tumor of the liver, requires professional attendance.

Diet.—Light and digestible—chicken broth; beef tea; toasted bread, scalded with hot water, with a little sugar; roasted apples; and as much cold water as the patient desires.

Accessory Means.—Flannel squeezed after immersion in hot water, or a hot hip-bath, relieves pain. Jaundice from inactivity and chronic Congestion of the liver requires change of air and scene, travelling, daily walking or horseback exercise, regular and temperate habits, and the use of the abdominal compress.

Peritonitis—Inflammation of the Peritonæum.

Definition.—Inflammation of the serous membrane which lines the abdomen, and invests and supports the viscera contained therein.

When the disease attacks parturient women it is termed "Puerperal Peritonitis," and is often dangerously contagious among this class of patients. (See Diseases of Women, Part IV.)

Symptoms.—Shivering and febrile disorder frequently, but not invariably, usher in the disease. There is a stitching, burning, and more or less constant pain, generally first felt below the navel and soon extending over the entire abdomen; great sensitiveness, so that pressure of the bedclothes becomes unendurable; the pulse is quick and small; and nausea, vomiting, and generally Constipation and Tympanites are present. The patient lies on

his back with his legs flexed, so as to relax the muscles of the abdomen. When Peritonitis arises from perforation of the stomach or intestine, the pain is sudden and intense, the abdomen becomes excessively sensitive, and the patient is liable to succumb suddenly.

Causes. — Mechanical violence, as a kick, operations, etc.; sudden and excessive changes of temperature; errors of diet; frequent intoxication. Inflammation of the peritonæum is often secondary to Enteritis, Hepatitis, Perforation of the intestine, or stomach, and Obstruction of the bowel.

Treatment.—In uncomplicated Peritonitis the following treatment, if commenced early, will be rapidly curative. Owing to the complications which frequently arise, the disease should always be under professional care; for if the treatment be not efficient, and also prompt, the disease may become chronic, or suppurative; or adhesions may take place.

Aconitum.—Peritonitis from cold, with predominance of febrile symptoms. A dose every hour till relief is experienced. It is also required early in the disease, in alternation with any other remedy selected. A low dilution should be used.

Bryonia. — Stinging and burning pains, greatly increased on movement; Constipation, general uneasiness, etc.

Mercurius Cor.—Sallow skin, yellow-coated tongue, and when Tympanites and Abscesses occur. It is especially useful in scrofulous patients.

Belladonna. — Brain disturbance — Headache, flushed face, throbbing, etc. A few doses usually suffice.

Accessory Means. — Hot fomentations to the abdomen to relieve pain; perfect quiet; frequent sips of cold water. Pieces of ice sucked in the mouth, or swallowed, will assuage the vomiting. When the acuteness of the attack is passed, mild, unstimulating diet, and the use of the abdominal compress (see p. 45). In some cases cold compresses do more good than hot fomentations.

CHAPTER X.

DISEASES OF THE URINARY SYSTEM.

Albuminuria.

Definition.—A morbid condition of the urine, symptomatic of renal disease, but not always consequent on it, and characterized by the presence of albumen.

Albuminuria is not Bright's Disease. It is always associated with it, but may exist prior to and independently of any renal disease. If neither blood nor pus be present in the urine, but if nevertheless it be coagulable in even a considerable degree, thereby indicating the presence of albumen, it does not follow that there is any structural change in the substance of the gland. Albuminuria is frequently of neurotic origin, is a symptom of Exophthalmic Bronchocele, and is sometimes consequent on cold bathing.

Diagnosis.—Dr. Roberts has shown how to determine whether Albuminuria be consequent on renal disease, by ascertaining—"(1) The temporary or persistent duration of the Albuminuria; (2) The quantity of albumen present, and the occurrence and character of a deposit of renal derivatives; (3) The presence or absence of any disease outside the kidneys which will account for the Albuminuria." Though albumen is not a constituent of healthy urine, it may exist in the urine of healthy persons, or of persons whose health is only slightly and temporarily disordered.

Symptoms.—The quantity, density, and color of the urine remaining at a healthy standard, the tests by heat and nitric acid show intermittent coagulability.

Causes.—Febrile and inflammatory diseases; visceral diseases, neurotic irritation; Dyspepsia; excessive albuminous diet, such

as eggs; bathing in cold water. Dr. G. Johnson has shown that prolonged cold bathing may produce transient Albuminuria; and if such bathing be frequently repeated, the consequent repression of cutaneous secretion may lead to increased blood pressure in the internal organs, and produce permanent mischief and structural degeneration of the kidney. It is probable that active swimmers are less likely to suffer than occasional bathers.

Epitome of Treatment.—Acon. (incipient); Ac.-Phos., Helon. (from nervous irritation); Lyc., Tereb. (with urinary symptoms); Ars., Apoc. (Œdema and dropsy).

Nephritis—Bright's Disease.

Definition.—Nephritis is inflammation of the kidneys, producing a morbid condition of the gland and its secretions.

Bright's Disease is a morbid condition of the kidneys; the term is "generic," and includes "several forms of acute and chronic disease of the kidney, usually associated with albumen in the urine, and frequently with Dropsy, and with various secondary diseases resulting from deterioration of the blood."

1. Acute Nephritis,—Acute Bright's Disease.

Symptoms.—Anasarca of the upper as well as the lower parts of the body—the hands and feet as well as the face being puffy and swollen; febrile symptoms—a dry, harsh skin; quick, hard pulse; thirst; and often sickness, from sympathy of the stomach with the kidneys. The skin is tense, with the infiltration of serous fluid through the subcutaneous areolar tissue, but it does not pit. There is frequent desire to pass water, which is scanty, highly colored or smoky-looking, albuminous, and of high specific gravity. If the urine be examined by the microscope, blood corpuscles may be seen in it, and granular casts of the minute tubes of the kidneys, consisting of numerous spheroidal tubes of epithelium; the kidneys being in an active state of congestion, if not of inflammation. If the urine be tested by heat and nitric acid, it will deposit albumen. This condition has been called Desquamative Nephritis, owing to the rapid separation of epithelium which goes on. The morbid anatomy of the kidney shows it to be small, hard, and granular.

As may be inferred from what has been stated, both a chemical

and microscopical examination of the urine is necessary, and should be made frequently, to determine the progress or decline of the disease. Indeed, without the aid of the microscope, it is often quite impossible to detect the variety and stage of the disease.

The renal symptoms are sometimes complicated with Pleurisy, Pericarditis, or Peritonitis.

Causes.—The effects of fever, especially Scarlet Fever, exposure to wet and cold, the action of irritating drugs, alcohol, etc. Dr. G. Johnson found, by an analysis of 200 cases, that intoxicating drinks cause 29 per cent. of all cases, 25 per cent. are due to exposure, and 12 per cent. arise from Scarlet Fever. The digestive and secretory functions being impaired, the blood and nervous system become deteriorated, the balance in the circulation is lost, and the secretion of the kidneys is changed.

2. Chronic Nephritis—Chronic Bright's Disease.

Symptoms.—Debility, general impairment of the health, and pallor of the surface, coming on insidiously, with pain in the loins, and frequent desire to pass water, particularly at night, the urinary secretion being at first increased in quantity. The patient's face becomes pallid, pasty, and œdematous, so that his features are flattened, and there is loss of appetite, acid eructations, nausea, and frequent sickness, which nothing in his diet can account for. His urine is found to be of less specific gravity than natural, as shown by the depth to which the urinometer sinks below its surface; it is also albuminous and coagulable by heat and nitric acid. There is most albumen at the beginning of the disease, because the kidneys are more congested; but it is of lowest specific gravity at the end, when the urinometer may go down to 1·004, and then the quantity of urine is very small. At first the urine may be of a very dark or smoky color, from containing blood corpuscles; but afterwards it becomes paler. The morbid anatomy of the kidney shows it to be large and white.

The disease progresses slowly; but sooner or later there is Anæmia, in consequence of the tenuity of the blood from loss of its albumen, so that it is incapable of producing or maintaining the floating cells characteristic of healthy blood. Œdema of the feet and ankles is present, and, in advanced stages, there may be

Ascites, or general Dropsy. But dropsy is not invariably a very marked symptom of the disease; it is sometimes scarcely observed, death arising from Uræmia—accumulation of urea in the blood from inability of the kidneys to excrete it. The urea acts as a poison on the brain, producing Delirium, Convulsions, and Coma; and of Coma the patient dies. Sometimes, from the poisoned state of the blood, inflammation of a serous membrane arises, especially Pericarditis or Endocarditis, setting up valvular disease of the heart, and then the patient becomes extremely dropsical, and is carried off by Asphyxia, from a complication of heart and kidney disease. At this advanced stage the kidneys are found to be nearly white, or of the color of a parsnip, anæmic, sometimes enlarged, and sometimes diminished in size.

Causes. — Chronic Nephritis often follows Acute Nephritis; sometimes it is a result of bad living, intemperance, constant exposure to wet; Struma, Gout. Workers in lead—painters and plumbers—are particularly liable to the disease. It is a constitutional disease; both kidneys are equally affected, probably from some defect in assimilation or other minute changes in nutrition.

Treatment.—The morbid condition in the acute and chronic form of this disorder is the same. In detail, therefore, the treatment must be strictly adapted to the peculiarities of individual cases. The results of the remedies and means employed must be tested at regular intervals by an examination of the urine. Patience is necessary; after carefully deciding as to the line of treatment, it must be steadily persevered in, as marked improvement can only be seen after considerable time.

Epitome of Treatment. — Acon. (incipient stage; feverish symptoms); Tereb., Canth., Chel. (acute stage); Ars., Sulph. (chronic); Nux V., Kreas., Ac.-Nit. (Dyspepsia); Opi., Ferr. (uræmic symptoms); Nux V., Ars. (from alcoholic drinks); Ac. Phos. (from suppuration or other cachexia); Plumb., Colch. (granular degeneration); Ac.-Phos. (amyloid degeneration); Phos. (fatty degeneration); Apis., Apoc., Asclep.-Tub., Merc.-Cor. (in pregnancy and Scarlet Fever); Ferr., Sulph. (convalescence).

Schmidt says he has obtained the most brilliant result by an exclusive skim-milk diet, when all other treatment had failed. An adult will sometimes take as much as a gallon in the twenty-

four hours. It may be given cold or tepid, and from half a pint to a pint at a time. A preponderance of vegetable food, which makes less demand upon the secretory function of the kidneys than nitrogenous products, is likely to facilitate the success of remedial measures.

Accessory Means.—In the acute disease, warm-baths, or vapor-baths, should be had recourse to early, to promote the functions of the skin, lessen the Dropsy, and to carry off from the blood deleterious matters, which may be retained in it by inaction of the kidneys. Vapor-baths are preferable to warm-baths, because they can be used at a higher temperature. The action of the bath may be much prolonged, and the bath in consequence rendered more efficacious, in the following manner. The patient is enveloped to the neck in a sheet wrung out of warm water, and three or four dry blankets are closely folded over it. He should be afterwards quickly dried, and wrapped up in blankets. If there be much Anæmia, warm baths should be employed with discretion. Further, to favor the free action of the skin, warm clothing—flannel and woolen garments— should be added, and chills and draughts guarded against. In chronic or convalescent cases, a healthy residence is necessary, including a sandy or chalky soil, and mild, dry air, so that out-of-door exercise may be taken. Patients with symptoms of Bright's disease should be encouraged to take abundance of open-air exercise as long as strength permits, chills and fatigue being guarded against. Bathing or cold-sponging, and frictions with a sheet or bath-towel, tend to arrest the disease and invigorate the health.

Cystitis—Inflammation of the Bladder.

(*a*) Acute Cystitis is a disease of rare occurrence, except when arising from Gonorrhœa, wounds, Calculi, the introduction of instruments, or other mechanical causes. Occasionally cold or damp may induce it.

Symptoms.—There is usually pain, sense of weight, tenderness on pressure, and extreme irritability in the region of the bladder, with rigors, and often alarming constitutional disturbance. The urine is ejected by a sort of spasmodic action as soon as it collects, with straining, and, generally, much suffering; and there may be discharge of mucus or pus, tinged with blood.

(*b*) Chronic Cystitis is more common; it may be the sequel to an acute attack; or it may be caused by Calculi, disease of the prostate gland, Stricture, etc.; but the most common cause is inability of the bladder to empty itself, either from loss of muscular power of its coats, or prostatic enlargement. The decomposing urine then becomes a source of irritation to the mucous lining of the bladder; the urea is soon decomposed into carbonate of ammonia, and this salt is acrid and irritating, and the bladder in time acquires a condition which has been aptly compared to that of a badly-washed utensil. The symptoms are the same as described under the acute form, though to a modified extent; but while the pain is less, the discharge is generally greater. The mucus is often very abundant, a pint or more being often passed in the day, and it becomes very tenacious on standing, so that when a vessel containing the urine of such a patient is emptied, an abundance of ropy mucus follows the urine in a mass.

Cystitis may be thus diagnosed from inflammation of the kidneys; in the former the pain travels upwards, towards the loins; while in the latter the pain extends from the loins down to the bladder.

Treatment.—The treatment of Cystitis must be regulated by its causes and associations. When simple, and resulting from cold, Acon. in alternation with Canth.; if from exposure to damp, Dulc.; if there be much nervous irritability, Bell. For the chronic form of the disease, Canth., Cann.-Sat., Apis., Eup.-Pur., Kali Hydriod., Puls., and Chim., are the best remedies. The last remedy is likely to be specially valuable.

Accessory Measures.—For the relief of pain, hot fomentations; and in acute cases, rest in the horizontal posture. The warm hip-bath; the abdominal compress; the mucilaginous drinks, favor recovery. Washing out the bladder is often useful; but only small quantities of tepid water—one to two ounces—should be introduced at a time; as far as possible, too, the water should be introduced like the continued percolation into it of the urine from the kidneys by the ureters, or the sensitive organs will be offended and injured. [Iodoform suppositories may be used to relieve the pain.]

Calculus—Stone—Gravel.

In the urine are washed away refuse matters resulting from digestion, assimilation, and the wear and tear of the body. Any deviation, therefore, from a healthy state of digestion and nutrition is sure to be followed by a deviation from the normal properties of the urine. A deposit may exist occasionally in small quantity unnoticed; it is the constant or abundant presence which furnishes important evidence of disease; but a frequent sediment should never be disregarded.

Definition.—When a precipitate is let fall from the urine after it has been voided, it is called a sediment; when precipitated in the bladder or kidneys, it is called gravel, the urine being muddy as it passes, and when gravel, lodging in any of the urinary passages, becomes concrete, it is called stone (*Druitt*). When the urine of a person habitually presents any one kind of deposit, he is generally said to have a corresponding diathesis, as the lithic diathesis, etc.

Varieties.—There are several varieties of Calculus; but the most common are, the uric or lithic, the phosphatic, and the oxalic.

The lithic deposit is observed in fever, chronic liver disease, etc., forming pink, or brick-dust-like coloring matter in the urine. When this is abundant, as in more advanced stages, it is commonly called red gravel. The lithates chiefly occur in robust persons of florid appearance, who live high and suffer from irritable gastric Dyspepsia; and sometimes are associated with Rheumatism and chronic skin diseases, but most frequently with Gout. The uric acid condition often alternates in the same individuals with Gout; even in generations this may be observed, Gout manifesting itself in one, Gravel in the second, and Gout again in the third. This is the most common variety, and may occur at any age.

The phosphatic, unless arising from changes in the bladder, usually depends on atonic Dyspepsia, and an anæmic or broken-down state of the constitution, and occurs chiefly in the aged.

The oxalic evidences feeble powers of assimilation, and exhaustion of the nervous system, from overwork, anxiety, or venereal excesses. The patient is usually pale and hypochondriacal, suffers from disturbed sleep, acidity, etc. There is no gravel or sediment

properly speaking; the particles of oxalate float as crystals in the urine, or subside if it be allowed to stand, but are not in large quantity.

Various tests are employed to determine the character of urinary deposits; but to these we cannot further refer.

History of Stone.—In the adult male, Stone is most common between the ages of fifty and seventy, or, perhaps, between the ages of fifty-five and seventy-five; and it has a history something like the following:—A Calculus in eighteen or nineteen cases out of twenty has uric acid for its basis, the uric acid or gouty tendency (for the diseases are identical) being hereditary; and the first symptoms are frequent deposits of pinkish matter in the urine on cooling, resembling minute particles of cayenne pepper, which are first formed in the kidneys. When a patient habitually or frequently passes urine which yields a pinkish deposit on cooling, and which cannot be traced to cold weather, errors in diet, or other accidental causes, he has what is called the uric acid diathesis. Afterward, these cayenne-pepper-like particles become aggregated, forming little Calculi, popularly known as "sand" or "gravel;" then, again, these tend in time to become larger, often as large as peas, or even beans. During the descent of the Calculus from the kidney to the bladder, the patient complains of severe pain in the back, hip, groin, and testicle, and great discomfort. In a day or two, or earlier, it is usually voided with the urine, and thus the matter is disposed of. But when the bladder is unable to expel the Calculus by its natural efforts, the Calculus increases in size, by deposit on its surface, and in time a Stone is formed that cannot be removed except by an operation.

Stone in Boys.—As stated, the observations in this Section refer to Stone in the adult male bladder. But sometimes Stone forms in the bladder of boys, the symptoms being frequent micturition, severe pain in passing water, occasional sudden stoppage of the urine, with accession of pain at the end of the penis, sometimes discharge of blood, muco-pus in the urine, and lithic acid deposits. The operation for removal of Stone in boys under fifteen years old is by *cutting*, and not by *crushing*. The former is a very successful operation in children; but the latter, unless the Stone is very small, is a difficult one, owing to the irritability of the bladder and the small size of the urethra at that age.

Symptoms.—There are four leading symptoms that are very conclusive. (1) *Increased frequency of passing water*, chiefly during the day, and when moving about, and less so at night, and when at rest. Riding on horseback, for example, greatly increases the frequency. (2) *Pain in the glans penis during and immediately after micturition*, and a continuous desire to pass water for a few minutes until fresh urine trickles down and separates the Stone from the lining of the neck of the bladder, which is a highly sensitive part. As soon as sufficient urine collects, relief is experienced. Pain at the end of the penis is highly diagnostic of Stone in the bladder. *Pain low down in the abdomen* is generally due to chronic inflammation of the bladder. Pain *before* urinating is generally caused by a sensitive or inflamed mucous membrane. (3) *The urine contains muco-pus*, such as is found in Cystisis, only to a greater amount. With Calculus the urine is almost invariably clouded by mucus or pus.* (4) *Blood is passed from time to time*, and the quantity is *increased* by much *exercise*, such as riding in a springless carriage, or over a rough road, on horseback, much walking, and by all rapid movements of the body. But if the patient remain quiet no blood at all may be passed, or a mere drop or two with pain in the last expulsive effort at urination. Generally the urine has a florid tint, while blood passed from the kidneys gives the urine a brownish color from long contact of the urine with the blood. The same remark applies to Hæmorrhage due to enlarged prostate.

Further Evidence.—The four symptoms above enumerated, occuring simultaneously, unmistakably indicate Stone in the bladder. But if additional evidence be desired, there are the chemical tests of the urine, involving the application of various chemical reagents, and the *sound*. The latter is an instrument, bent a

*It is important to discriminate between urine clouded by mucus or pus, and urine clouded by deposited salts. In cold weather the urine, on cooling, readily deposits its lithates, where none would be seen in hot weather. On the application of heat it becomes quite clear, which is never the case if the thickness be caused by pus or mucus. Occasional thickness of urine from lithates is of no great importance. But if the deposit be constant and heavy, habits must be corrected, diet restricted, and indigestion removed. If the urine does not become clear with heat, an organic compound is the cause of the thickness, and the source of it must be investigated.

little shorter than the ordinary catheter, by means of which nearly every portion of the bladder can be explored. A large Stone can thus be readily detected, but a small one requires skill and care. It is important, however, to be able to find a small one, if present, as it can then be generally removed by the operation of Lithotrity or crushing. A better acquaintance with the subject of this Section will lead to the early detection of Stone, and, when it is sufficiently small to admit of being crushed in the bladder, with a probability of entire success.

Prevention of Calculus Disease.—For the Indigestion and other symptoms which precede the formation of Calculus, a three or four weeks' course of Friedrichshalle water is recommended, six to eight ounces, with four or five of hot water every morning an hour before breakfast, diminishing the quantity gradually, till about half the quantity suffices. After the Friedrichshalle, Carlsbad water may be given in the same manner. Cider has a beneficial influence on those who possess a lithic diathesis. Milk, however, has the reputation of being the great anti-lithic.

The classes of aliment which it is specially necessary to restrict are—(1) *sugar*, in whatever form or combination this substance is presented; (2) *fatty matters*—butter, cream, and fat meat—whether simply cooked or in the form of pastry; (3) *alcohol*, especially in the form of sherry, port, and the stronger wines; tea and coffee; also strong beer, champagne, etc. Abstinence from these substances is recommended on the ground that the labor of the liver will be thus greatly lightened, and correspondingly the vicarious work of the kidneys will be diminished. *Filtered rain*, or *soft* or *distilled water* has a very great solvent power, and may be taken to the extent of two or three pints daily. Further, a fair amount of open-air exercise daily, and the promotion of the healthy functions of the skin by bathing, frictions, and suitable clothing, as directed in Part I. of this work.

Treatment of the Diathesis.—Patients having a predisposition to the formation of Stone, especially if they have passed Calculi with their urine, require medical treatment and careful supervision to correct the tendency; for although useless to remove a Stone of size, remedies aid in the expulsion of sand or gravel, and also correct the tendency to such formations. Under

our treatment many patients who formerly passed small Calculi have entirely ceased to do so.

First and foremost, all avoidable causes must be removed—high living, the use of alcoholic liquors, and insufficient exercise, on the one hand; and over-work, anxiety, and excesses of all kinds, on the other. Dyspeptic symptoms should be met by such means as are pointed out in the Section on Dyspepsia; and any other concurrent disorders should be corrected. Removal to a locality where pure soft water can be procured is often alone curative.

Medicines.—Among those used, the following are probably the most successful:—Ac.-Phos., Nux-V., Ac-Oxal., Lyc., Cann., Berb. tinct., Gels., Acon., Canth., Nat.-Carb., Podoph., and Merc.

When a Stone becomes dislodged, and is passing from the kidney down the ureter towards the bladder, or from the bladder through the urethra, the pain is extreme; the membrane of the canals is liable to become lacerated, and inflammation and suppuration may supervene; or Irritability, Spasms, or Incontinence may trouble the patient for a long time.

To prescribe for a patient with Stone in his bladder such remedies as Cann., Bell., Nux V., or Phos.-Ac., to remove the pain and frequency of micturition; or Vichy water to correct the altered urine; or Ham., or Canth., to arrest the hemorrhage, is useless, except to afford temporary relief; it would be wasting precious time, and throwing away the opportunity of cure which an operation offers. A large stone, requiring the formidable operation of Lithotomy or cutting, is the growth of years, and can only occur in those who, notwithstanding a long period of suffering, disregard the severest warnings, and neglect to seek that aid which surgery is able to afford.

All cases in which there is even room for a suspicion of Calculus should be at once placed under the care of a physician.

Irritability of the Bladder; and Spasm of the Bladder—Strangury—Difficulty in Passing Water.

These conditions are usually consequent on some diseases of the urinary organs—Cystitis, Calculus, Gonorrhœa, etc.; or are associated with Gout, Hysteria, or other conditions.

Symptoms.—Frequent desire to urinate; the fluid is forcibly or spasmodically ejected in small quantities; and its passage is attended by burning, aching, or spasmodic pain (Strangury); the pain is confined to the bladder, or extends to the end of the penis, round the pelvis, or down the thighs. The urine may or may not be unnatural; but when the disease has become chronic, mucus or pus is passed with it (Catarrh of the bladder). In children, irritability of the bladder is sometimes caused by worms.

A person in health passes water on an average about five or six times a day, and has not to rise generally in the night for this purpose; but when there is any degree of inflammatory action of the bladder, the inflamed mucous membrane cannot bear much distention, so that five or six ounces of urine, or even less, excite a desire to urinate, although under healthy conditions the bladder contains without inconvenience fifteen or sixteen ounces.

Epitome of Treatment.—Nux V. (Spasm); Ferr. (simple irritability during the day); Bell., (irritability in children and hysteric females); Apis (Strangury); Acon. (Strangury from cold); Dulc. (from damp); Camph. (in urgent painful cases); Canth. (with or after Inflammation of the parts); Lyc. (with much red sediment or gravel).

Accessory Means.—Mucilaginous drinks, the tepid hip-bath, etc. It is important to recollect that Strangury is not a substantive disease, but a symptom resulting from various causes, the removal of which is necessary before the bladder can regain its healthy sensibility and tone.

Retention of Urine.

Definition.—Obstruction to the discharge of the urine.

Diagnosis.—Retention is liable to be confounded with Suppression of urine; but in the latter condition the kidneys are the seat of the disease, and do not secrete the urine; in Retention the urine is secreted, but the fault is in the bladder, its sphincter, or in the course of the urethra, in which there may be some cause of obstruction, as Stricture, diseased prostate, etc. Suppression may be easily distinguished from Retention, for in the latter disease the bladder is distended with urine, and may be felt at the bottom of the abdomen; while in Suppression, the bladder is

empty and can scarcely be felt. If it be deemed necessary to introduce the catheter, the diagnosis will be confirmed: in Retention the bladder will be found full, but in Suppression empty; the latter condition, however—except in temporary cases, when Tereb. will be rapidly curative—is attended with extreme peril, as the urea and other elements of urine accumulate in the blood when the kidneys have fallen into disease, and no longer secrete the urine; the patient becomes uneasy, then drowsy, and soon Coma and effusion upon the brain supervene.

Causes of Retention.—Acute febrile disease; fibrinous exudations, causing stricture; injury, causing Paralysis of the lower part of the spinal cord; loss of tone in the muscular structures of the bladder, leading to Paralysis of that organ, common in old age; enlarged prostate in old men.

Spasmodic Stricture.—Retention of urine sometimes results from Spasm of the compressor urethra muscle, which surrounds the membranous part of the urethra; the Retention is sudden and complete, although the patient may have been able to urinate a little time before. The exciting causes are—indulgence in drink, holding the urine too long, exposure to cold, etc. Spasmodic Stricture is not likely to occur except in persons already suffering from a slight degree of permanent Stricture, or gleety discharge, or an abnormal condition of the urine.

Treatment.—*Aconitum.*—Inflammatory symptoms, often in alternation with some other remedy, especially Cantharis.

Camphor.—Spasm at the neck of the bladder, especially if caused by Cantharides (a drop on a piece of loaf-sugar every fifteen minutes for three or four times).

Cantharis.—Urging to urinate; cutting and tearing pains.

Clematis.—Difficult passage of urine; heat or slight burning, with occasional stitches in the course of the urethra while passing water; Stricture of the urethra after repeated attacks of Gonorrhœa, and in cases temporarily relieved by the introduction of bougies.

Nux Vomica.—Painful ineffectual efforts to urinate, caused by the use of wine or spirits; spasmodic Stricture.

Sulphur.—In alternation with the last remedy, if the patient be troubled with Piles.

Cann., Tereb., Uva U., Phos.-Ac., Bell., Iod., Ars., Chim., are additional remedies often required.

Accessory Means.—The introduction of the catheter, so frequently resorted to under the old treatment, is often superseded by the more efficient remedies we employ; still it may be necessary in some cases; as in enlarged prostate, or paralysis of the bladder. External applications—warm baths, hot fomentations—bland drinks, and injections by the rectum, greatly aid the medicines in restoring the functions of the parts, if there be not incurable organic disease. The diet should be sparing, and, in some severe cases, restricted to barley-water, gum-water, or other diluents.

Gonorrhœa—Venereal Disease—The Clap.

Definition.—A specific disease characterized by Inflammation of, and a muco-purulent discharge from, the mucous membrane of the male or female urethra, and contiguous portions of the genital organs, produced generally by the contact of a specific virus.

The word Gonorrhœa means, literally, a flow of semen, and was so named by the older writers, who erroneously regarded the discharge as one of semen. The specific virus contained in the discharge is distinct from that of Syphilis, and does not affect any other tissue except the mucous, although the mucous membrane of the eye, nose, or anus, may furnish the specific poison if inoculated with the pus from a membrane similarly affected.

Time and Order of the Symptoms.—The disease declares itself in from two to eight days after an impure connection; in rare instances, in a few hours, or, in others, not for ten or fourteen days. The symptoms have been divided into three stages, the initiatory, the inflammatory, and the chronic. There is first experienced a tingling or itching sensation, with some degree of heat in the urethra and at the end of the penis, especially when urinating. The orifice of the urethra soon becomes red, swollen, and adhering together by a thin, whitish secretion, and if pressed between the finger and thumb, muco-pus exudes. As the inflammatory stage sets in, there are burning or scalding pains on passing water, with increased secretion from the affected part, at first thin, but soon becoming thick, milky, yellow, green, or even

bloody. During this stage, broken rest at night, a good deal of constitutional disturbance, and complications, such as are afterwards mentioned, are prone to arise.

After the disease has continued for about seven to fourteen days, the inflammatory symptoms begin to subside, and the chronic stage sets in: there is more or less irritation in passing water, and a yellow discharge, which under unfavorable circumstances may persist for a long time, and then terminate in an obstinate, thin, transparent, painless discharge — Gleet; this is especially likely to occur in strumous, phlegmatic, or gouty constitutions, and in patients subject to chronic cutaneous diseases.

Complications of Gonorrhœa.—(1) Irritation, Congestion, or even true Inflammation of the urinary organs, causing a frequent desire to pass water, but extreme difficulty and pain in doing so; or there may be complete Retention of urine, from Spasm of the neck of the bladder, excited by inflammatory irritation. (2) In the male, frequent and involuntary erections, crooked and painful, occurring chiefly during the night—Chordee. This condition is caused by an effusion of lymph or plastic matter into the spongy substance of the urethra, and is present in nearly every stage of Gonorrhœa during the inflammatory stage, especially at night. (3) A thickened and constricted condition of the glans penis, and effusion under it, so that the foreskin cannot be retracted—Phimosis. (4) Paraphimosis—inability to draw the foreskin forward after it has been retracted. (5) Inflammation of the lymphatic glands of the groin—Sympathetic bubo. (6) Inflammation of the testicles—Orchitis—coming on at a later stage of the disease, when the discharge has nearly ceased, and is probably an extension of the inflammation from the urethra; it is marked by pain, greatly increased when the organs hang unsupported, excessive tenderness, swelling, fever, and often vomiting. (7) Rheumatism. (8) Ophthalmia.

Cause.—The most common is specific virus caught from impure or indiscriminate sexual connection. This morbid matter does not reach the general circulation, for it is limited to the pus globules contained in the purulent secretion; and these, it seems, are not capable of absorption. When complications arise, they

affect parts connected with the original site of the disease by continuity of mucous surface,—the prostate bladder, and testicle.

Gonorrhœa is sometimes occasioned by connexion with a woman not suffering from disease of a specific venereal character. The menstrual fluid, acrid Leucorrhœa, want of cleanliness, etc., in the female; or, an acid state of the urine, a gouty or rheumatic diathesis, the irritation of Stricture, exposure of the organs to cold winds, etc., in the male, may give rise to the discharge. Patients most liable to this affection have a weakened or scrofulous constitution, usually a large urethral orifice, and a long narrow prepuce. It is also chiefly restricted to persons under twenty-five or thirty years of age.

Treatment.—In the treatment of this disease Homœopathy offers many advantages; the medicines are safe, pleasant, and effective, sometimes rapidly so; by their instrumentality the patient generally steers clear of all or most of the usual sequelæ; and they do not interfere with the usual comfort, occupation, or health.

Epitome.—I. *Abortive Treatment.*—One of the following injections:—

(*a*) *Hydrastis*, 1 dr. to 6 oz. dis. water.

(*b*) *Argenti nit.*, 2 grs. to 8 oz. dis. water.

(*c*) *Zinci Sulph.*, 8 grs. to 8 oz. dis. water.

II. *Inflammatory Stage.*—Acon., Cann., Canth., Merc.-Cor., Copa., Petrol. Also the use of a suspensory bandage.

III. *Gleet.*—Mer., Gels., Nux, Sulph., Agnus Castus, Hydrast., Petrol., Matico., Still.; also a recourse to the injections, the first named especially being of great value.

IV. *Balanitis.*—Merc.-Sol., Acon., Hydrast.

V. *Chordee.*—Acon., Canth., Gels., Arg.-Nit., Still.

VI. *Orchitis.*—Puls., Iod., Acon., Gels., Clem., Merc., Ham. Phyto. The testicles should be supported by a suspensory bandage.

VII. *Prostatitis.*—Bell., Atropine, Merc.-Iod.

VIII. *Rheumatism.*—Colch., Coloc., Ran.-Bulb., Rhod., Rhus, K.-Hyd., Sticta.

IX. *Stricture.*—Puls., Eupat.-Purp., Agaric, Clematis, Iod. (See next Section.)

X. *Warts.*—Thuja, Ac.-Nit.

XI. *Phimosis.*—Acon., Bell., Cann., Gels. Also warm baths, wet compresses, etc.

Cold baths or sea-bathing, regular and early hours, and good, temperate habits and living, are also necessary to insure successful results.

We have entered only superficially into the management of this disease: considerations of its difficult nature, its numerous and annoying complications, and the risk of exposing another to contagion, render professional treatment most desirable.

Spermatorrhœa.—Involuntary Emissions.

The subject which heads this Section claims our special attention for several reasons, more particularly the following:—The extreme frequency of the complaint; the moral and physical dejection which it causes; the too common indifference with which it has been met by the medical profession; the damaged health, and exhausted resources, frequently occasioned by charlatans, who find it a fruitful field for plunder; and, lastly, the comparative facility of cure when proper remedies are administered, and a judicious line of conduct fairly persevered in. These considerations meet us on the threshold of the inquiry, and form ample justification for the unusual length of this Section.

Definition.—Involuntary seminal discharges, occurring either during sleep, or under various conditions at other times, and associated with irritability and debility of the generative organs.

Extent and Evils of the Habitual Cause.—We have had considerable opportunities of investigating this subject, the result of which is the conviction that the evils of the above condition are wide-spread, beyond the credibility of those who have not thoroughly investigated it. The notion that boys are ignorant of the subject, and that we ought not to remove that ignorance, is wholly incorrect. Self-abuse is of such extreme frequency, that it is a question whether even a majority of the youth of all classes of the community do not practice it. The consequences of the habit occasion the deepest mental distress and too often disqualify the patient for the discharge of the ordinary duties of life. Unfortunately, we find such patients exhibit extreme feebleness

in overcoming incitements to sexual vices, inability to control the will being one of the most lamentable results of self-abuse. Instead of exercising mental and physical self-control, patients too often abandon themselves to self-reproaches and despair, and unless rescued by a prompt and strong, but kind hand, extreme demoralization is inevitable.

Our experience forces us to the conclusion that, notwithstanding the magnitude of the evil, the subject has been much overlooked, or underrated, by medical men generally. We are frequently told by patients that medical men appear to ignore the functional diseases of the generative organs, and manifest indifference with respect to the matter. Probably in many cases we have been consulted from an insuperable dislike on the part of patients to confront a medical man in their own neighborhood on a subject of such extreme delicacy. The whole question, however, demands far more attention from the profession than it has yet received, both on account of the physical and mental sufferings involved, and the charlatanism and imposture which professional neglect involves. Numerous cases have come under our notice in which shattered health and exhausted resources have resulted from sufferers falling into the hands of the hosts of advertising quacks who in large towns prey on patients of this class. Newspaper proprietors are great offenders against public morality by opening their columns to quack advertisements, and thus prostituting a powerful influence to co-operation with charlatanism.

Causes.—Spermatorrhœa is most frequently the result of a direct violation of a great physiological law, the habit of sexual excitation — self-abuse — either accidentally acquired or learned from associates, as in schools, and subsequently continued under the influence of a morbid imagination, or from the excitement occasioned by impure books or conversation, reports of divorce-court trials, etc., often in ignorance of the consequences of the vicious practice. Schools, especially boarding-schools and colleges, are often fruitful sources of instruction and initiation into this vice. From innumerable frank personal disclosures made to us in our professional capacity, we have ground to conclude that schools are the very hotbeds of this degenerating habit. Other causes may be—morbid conditions of the urethra, irritability of

the bladder, as shown by wetting the bed; Indigestion with constipated bowels, violent contraction of the levator ani, causing an escape of semen; rectal irritation from Worms, which occasion scratching or friction, and thus lead to determination of blood to the organs; Piles, acting in a like manner; Prolapsus ani; a too long or narrow prepuce, or the collection of secretions under the prepuce, causing irritation; horseback exercise; frequent excitation of the sexual passion without natural gratification; sexual excesses; disease of the brain or spinal marrow; chronic exhausting diseases, as Phthisis, etc.

Lastly, we are led to conclude, from cases that have come under our own observation, that the causes of masturbation are sometimes inherent. Under such conditions the organs become extremely debilitated, and liable to excitation, with secretion and discharge of seminal fluid, from slight emotional causes — a thought, a glance, a word,—or by trivial and common physical agents, the oscillations of a carriage, the contact of the saddle in riding, climbing, the efforts of straining at stool, etc.

Effects.—These are often greatly exaggerated in the suggestive pamphlets of those who prey upon this class of patients. Nearly all the patients who consult us have previously read one or more of these pamphlets, and have had their happiness destroyed by the alarming and overdrawn statements they contain, every nervous sensation or symptom of indigestion being connected with Spermatorrhœa, as cause and effect. The following are, perhaps, the most common results of this sexual vice:—depression of spirits, often to an extreme degree; bashfulness, and inability to look frankly into the eyes of another, especially of the same sex; weakness of memory and other senses; enfeebled intellect; indecision and loss of moral control, sometimes to such an extent as to render the patient incapable of resisting temptation to the vicious habit; weakness, with pain or aching in the back; Indigestion, with oppression after food, Constipation, Flatulence, Palpitation, Headache, cold, damp hands, and moist skin; spots of Acne on the face; sunken eyes, paleness of the face, and loss of the healthy tints of the lips, the patient looking older than his years; stunted growth, the physical drain checking nutrition, and preventing in early life perfect bodily evolution; Paralysis, Impo-

tence, etc. Remorse is often so keen and withering as to interpose the greatest barrier to success in the treatment. If indulgence in the habit were commenced early, and have been frequent and long-continued, the physical and mental injury is more serious and general, and no doubt sometimes leads to the deposit of Tubercle in the lungs. Happily, a course of judicious treatment is generally sufficient to effect a cure, and to restore the patient to a life of usefulness and happiness. In numerous instances, patients formerly under our care, and whose despondency was often almost extreme, have subsequently married, and been blessed with full domestic felicity.

Preventive Measures.—The sexual instinct in man is strong, and is the means provided by the Creator for the propagation of the race. But the precocious development of this passion may be prevented; and when, on account of youth and other circumstances, its gratification would be imprudent, it may be kept in abeyance by proper measures and correct discipline—the discipline leading to manliness of character, and at the same time better fitting the individual for the duties and enjoyments of mature manhood. Chastity tends to great moral energy of character, and contributes to a superiority and vigor of intellect which contrasts most favorably with the feebleness of the incontinent. Indeed, we find many patients of the latter class lack sufficient resolution to employ the measures necessary to their restoration, thus rendering our task difficult and tedious. The following suggestions are offered in much confidence, and if faithfully adopted, will, in the majority of cases, suffice to prevent sexual vice.

1. *Good Physical and Mental Training.*—The systematic adoption of muscular and mental exercises expends the nervous energy, diverting it from the sexual organs, so that amorous thoughts and propensities become less prominent. The regular practice of gymnastics and athletic exercises, to an extent short of causing excessive fatigue, is of the first importance. Blood is thereby diverted from the internal organs to the muscles, and while the economy is occupied in repairing the wear and tear thus occasioned, semen will be but scantily, if at all, secreted. Much of the sexual vice of the present day is chargeable to the neglect of proper recreation, instruction and amusement, by the

young men of cities and towns in their leisure hours. Mental occupations also exercise a like tendency, though, perhaps, to a less degree. Constant and congenial occupation and recreation, bodily and mental, during the hours of relaxation, are indispensable. As just stated, the greatest danger arises during the hours of leisure, for if the mental and physical powers are not then employed, the mind is almost sure to be occupied with sexual thoughts. To a considerable extent, the habits we are considering have arisen from young persons having had no object of pursuit when the ordinary work of the day was over.

Besides preventing the formation of a vicious habit, constant and congenial physical and mental occupations are necessary in most cases to the maintenance of a strictly continent life, and we recommend them as infinitely preferable to occasional illicit sexual intercourse. We are sorry to find from the testimony of patients that some medical men recommend sexual intercourse to the unmarried. Viewed medically, we think this most unwise, for such intercourse stimulates without satisfying the sexual passion, and at the same time exposes the individual to diseases of the most disgusting and baneful character. It is easier and safer to abstain entirely from sexual intercourse than it is to indulge occasionally. Total abstinence—not occasional illicit indulgence—is therefore the only safe course. Diligent cultivation of the will, the practice of regular and healthy exercises and gymnastics, suited to individual peculiarities, are sufficient to preserve continence. Fashionable and idle habits are the great cause of solitary vice on the one hand, or of venereal excesses and diseases on the other. The establishment of systematic exercises at home and in schools—athletic sports, gymnasia, etc.; libraries, literary and scientific institutions, including the instructive and interesting experiments in chemistry, electricity, mechanics and other sciences; the study of botany, geology, etc.; all these are highly useful, for they preoccupy the mind, and so prevent loose thoughts and habits.

2. *Chaste Thoughts and Conversation.*—The cultivation of pure thoughts and conversation among the young would remove occasions of great temptation to sin. Parents, guardians and teachers should exercise a strict supervision over the books that are read. Much of the literature of the present day is of a

character that tends to emasculate the mind of the reader, to crowd it with fancies and follies, incite it to passions, and pave the way directly to the evils under consideration.

3. *Avoidance of Stimulants and Luxurious Habits.*—The too free use of meat, highly-seasoned dishes, wine, late suppers, etc., stongly tend to excite animal propensities, which directly predispose to vice. Probably most persons in health, enjoying ample means, eat and drink too much. Strict temperance, both in eating and drinking, is a great preventive. Soft beds and too much sleep are also to be avoided.

4. *Direct Instruction and Caution.* — Young persons, who, there is reason to believe, are ignorant of the practice of self-abuse, should be kept so, but watched, and it may soon be observed if he or she be addicted to this vice.

When there are any symptoms, a careful examination should be made, and the actions closely but unobtrusively watched. An examination of the linen generally affords conclusive evidence in the case of boys; the genital organs of these patients, it may be noticed, too, receive an undue share of their attention. If the practice is found to exist, its discontinuance must be made imperative, and the dangers pointed out that will inevitably follow a persistence in the habit. The delicacy of the subject must never be allowed to operate as a barrier to an important duty. The patient should be constantly watched during the day till he falls asleep at night, and be required to arise directly he wakes in the morning. In confirmed cases, the night dress should be so arranged that the hands cannot touch the genital organs.

5. *Important Precautions in the Management of the Young.*—Under no circumstances should nurses ever be permitted unnecessarily to handle or expose the genital organs of children, and children should be taught at the very earliest period that it is immodest, and even wrong, to handle the parts. In schools, as well as at home, every boy should have a separate bed. The neglect of this important advice is a frequent cause of bad habits being taught and practiced. In addition to a separate bed, he should be able to dress and undress apart from the observation of others. One of the few articles necessary in the sleeping-room is a sponge-bath. This, with a good-sized piece of sponge,

and a large towel or sheet, complete the outfit. The regular daily use of the sponge-bath conduces greatly to the cure or prevention of Self-abuse.

If the habit have been acquired, and any of the effects already stated developed, a proper course of treatment will usually suffice to restore the health, providing the habit be relinquished. The best homœopathic doctor within reach should be consulted; or if there be none near, one should be consulted by letter. Under any circumstances all advertising quacks, and all advertised quack medicines, should be avoided. Hundreds of cases have come under our care with damaged health and exhausted purses, from falling into the hands of advertising quacks.

Treatment.—This must be both medical and hygienic, and include all available methods for establishing the constitutional strength, soothing excitement, removing local causes of irritability, and forming healthy habits both of mind and body.

The medical treatment involves the administration of homœopathic remedies, only a few of which are described in this work —Agnus Cas., Bary.-Carb., China, Canth., Phos., Plat., Ign., Ac.-Phos., Gels., Staph., Iris, Nux V., Sulph., etc., the selection and doses of which can only be determined by the local and general symptoms of individual cases. Amplitude of resources are pre-eminently necessary in the successful management of this affection.

Although alone insufficient, the treatment by appropriately chosen drugs has often a marvellous power in speedily correcting the most distressing cases that come under our notice; but it would far exceed the limits of this work to state the indications for the various remedies that are prescribed in this affection.

The hygienic treatment must be considered from a high standpoint, and include the commercial, social and moral relationships of the patient—occupation, recreation, literary tastes, and mental and moral discipline; diet, sleep, bathing, etc. The circumstances of each patient should be diligently investigated, and the management strictly regulated accordingly.

We have aimed to say as little as is consistent with our desire to arouse parents and teachers to a sense of their duty to the young in this matter. It may by deemed by some indiscreet to

treat of such things in a work like the present; but so wide-spread an evil, affecting the health and happiness of future generations, and even the welfare of the nation itself, demands that false delicacy be cast aside, that the sin may be known, and its progress stayed.

CHAPTER XI.

DISEASES OF THE CUTANEOUS SYSTEM.

Erythema—Inflammatory Redness of the Skin.

Definition.—Hyperæmia of the cutis, manifesting itself by superficial redness or blush of the skin without swelling or breach of continuity.

Varieties.—The varieties are named according to their characteristics. When it occurs on the surface of an œdematous swelling it is called *Erythema lœve*. *E. fugax* is simply a fleeting patchy redness [and is due to gastric disturbance or local irritation.] *E. marginatum* designates a redness with a well-defined circumference. [*E. entertrigo* is produced by the friction of opposed surfaces of the skin, and occurs in fat persons, and in not well-cleaned children.] *E. populatum* consists of small spots varying in size from a pin's head to a split pea, raised after a time into a papular form, of a vivid color, becoming pale on pressure and dying away in a few days with slight desquamation. The spots may be aggregated or distinct, and are seen especially on the back of the hand, the arm, neck, and breast. The disease lasts about three weeks, and seems to be associated with rheumatic symptoms. It occurs mainly in young people. *E. tuberculatum* is the same disease, in which the Erythema becomes somewhat tuberculated; it is often seen in servants who make a change of residence from country to town. *E. nodosum* is a more marked stage of the last; the spots are sometimes as large as a walnut or even much larger, oval in shape, the long diameter being in a majority of cases parallel to that of the limb: they are

generally seen on the front of the leg, rarely on the arm, or above the knee. This variety seems to be connected with adolescence (*Fox*).

Erythema, especially if chronic, is sometimes due to stomachic derangement; flushing of the face after meals is a common erythematous symptom. [It is not infrequently caused by overdosing with such drugs as copaiba, quinine, chloral, salicylic acid, and the bromides and iodides.]

There is no marked itching; nor heat, tension, burning, or exudation, as in erysipelas, for which it is sometimes mistaken.

Epitome of Treatment.—Bell. (simple redness, and *E. papulatum*); Acon. (febrile disturbance, and flushing of the face from excitement); Apis (*E. læve*, and *E. nodosum*); Rhus 3x (*E. nodosum*); K. bich. (*E. papulatum*, if Bell. be not sufficient); Nux V. (flushing after food); Bry., Mang., Ferr., Ars. Ran.-Bulb. [Ars. iod. (*E.* of the face); Mez. (on the legs); Ustilago (circular, on neck); Chloral Hyd., Chel., Lactic Acid, Puls.]

Accessory Measures.—Regular open-air exercise; sufficient time for, and freedom of the mind during meals, simple food; and the free use of cold water internally and externally. Where there is pain, as in *E. nodosum*, a compress moistened with Goulard-water relieves. Obstinate cases may require the local use of electricity.

Urticaria—Nettle-Rash—Hives.

Definition.—A transient, non-contagious affection, characterized by an eruption of prominent patches or wheals, either redder or whiter than the natural skin, of regular or irregular shape, with heat, tingling and itching, more or less severe. The wheals are probably produced by muscular spasm affecting limited portions of the skin.

Varieties.—Urticaria may be acute or chronic. Of acute cases there are two kinds: *Urticaria febrilis*—marked by much febrile disturbance; and *U. conferta*—distinguished by the great number and frequent coalescence of the "wheals." Chronic Urticaria may be *U. evanida*—evanescent, without febrile symptoms, and with trifling redness; *U. perstans*—persistent nettle-rash; *U. subcutanea*—"subcutaneous Nettle-rash, a nervous affec-

tion of the limbs, accompanied at intervals with an eruption of Nettle-rash;" and *U. tuberculata*—characterized by the production of elevations of considerable size, extending deeply into the subcutaneous cellular tissue.

Symptoms.—Similar to or more intense than those produced by nettle stings. The eruption consists of elevations, occurring in streaks or wheals of an irregular shape, on a red ground; the character of the rash becomes much more marked after scratching or rubbing, "so that it is possible, by using the nail of the finger, to write one's name on the skin;" it is generally worse in the evening, and when the body is exposed to cold air. There is much tingling and burning, and often the eruption, after disappearing suddenly from one part, shows itself in another. "In the Urticaria from irritant food—*Urticaria abingestis*—hyperæmia and burning heat are present in the most aggravated form" (*Wilson*). The spots contain no fluid, and do not end in desquamation. It is most common in spring and early summer, is not contagious, may occur at any age, and in the same person repeatedly.

Causes.—Derangements of the digestive organs, following the use of some particular kinds of food, among which we may specify bitter almonds, cucumbers, mushrooms, oatmeal; shell-fish, especially mussels; and certain kinds of medicines, such as Cubebs, Copaiba, Valerian, etc. Also mental depression, anxiety, defective innervation, and sometimes, according to Hebra, uterine irritation. The skin being extremely sensitive, it is easily excited by external irritants—such as the wearing of flannel next the skin, the bites of fleas, the sting of bees, etc. [It is occasionally associated with irregularities of menstruation, and with the presence of parasites in the alimentary canal.]

Chronic, also intermittent, Urticaria is frequently associated with uterine or other diseases, and is often very obstinate. Cold, damp, rapid changes of temperature, and Dentition, favor its development in patients predisposed.

Epitome of Treatment.—*1. Simple Urticaria.*—Apis, Urt.-U., Acon., Chlor.-Hyd.

2. *From Gastric Disorder.*—Ant.-C., Nux V., Puls.

3. *From Cold.*—Acon. (from draughts and cold winds); Dulc. (from damp).

4. *Associated with Other Affections.*—Bry., Cimic., Rhus (rheumatic patients); Colch. (gouty subjects); Ars., Ipec. (Asthma); Puls., Hydras. (uterine irregularities).

5. *Chronic cases.* — Ars., Chin.-Sulph. (intermittent); Apis, Sulph., Chlor.-Hyd. (astacus fluv). [Anacardium, E. Fagopyrum.] (*U. tuberosa*); Cim. (from menstrual disorders); Kali Carb. (during menstruation).

6. *Special Symptoms.* — Acon. (febrile disturbance); Chlor.-Hyd. (appearing when warm in bed); Bry. (sudden retrocession); Ign., Anac. (mental depression and confusion); Coff. (sleeplessness and nervous irritability).

Accessory Measures.—A general warm bath is invaluable; it soothes the skin and often cures at once. When the eruption is thoroughly out, the heat and irritation may be materially alleviated by smearing the whole surface of the body with fresh-cured bacon, or the parts rubbed with slices of lemon. [Weak vinegar or benzoic acid washes are very agreeable.]

Hygiene.—A dry, uniform, and moderate temperature; plain food; plenty of open air exercise; great cleanliness. Draughts, changes of temperature, indigestible food, and all exciting causes, must be removed and avoided. If flannel be worn, it should be over a garment of a different material.

Prurigo—Itching of the Skin.

Definition.—"A chronic affection of the skin, characterized by a thickened and discolored state of that membrane, with excessive itching, and, generally, an eruption of papulæ."

Symptoms.—Intense itching, and creeping sensation; patients scratch and tear themselves till the blood flows; their sleep is frequently disturbed, and their existence is thus often rendered almost unendurable; or the impulse to incessant scratching is so powerful as to induce the patient to seek seclusion. Sometimes the itching is diffused irregularly over the surface; at other times it affects the extremities; frequently it occurs around the anus, or on the female genitals. It is often a horrible and most obstinate disease.

Causes.—The predisposing are—constitutional taint, senile decay, chronic disease, etc. It is generally a symptom of lowered

vitality, or of decay of the skin; the skin loses its elasticity, firmness, and fat; and its secretion is disordered. It has been thought that the disease was caused by pediculi; but it is not so. Pediculi are only present in Prurigo in uncleanly persons. Exciting causes are—rich, indigestible food, stimulating drinks, extreme heat or cold, etc. In summer-time a mild form sometimes attacks young persons.

Treatment.—*Aconitum.*—Furious itching all over the skin, with febrile symptoms.

Sulphur.—Severe itching, attended with thirst and dryness of the skin, worse in the evening, and in bed, This is generally a prominent remedy, and is frequently specific, especially in recent cases.

Arsenicum.—Itching with burning; or an eruption emitting watery fluid like sweat, and attended with much constitutional weakness. It is most suitable in chronic cases.

Ignatia.—Itching of the skin, of a fine pricking character, resembling fleabites, and changing from one part to another.

Other remedies are sometimes required:—Merc., Carbo V., Rhus, Mez., Apocy., Caust.

Accessory Means.—The skin must be strengthened by wholesome and regular diet, frequent exercise in a bracing air, and daily ablutions with tepid water. Without these measures medicine will be of little permanent use. Stimulating food or drink, pastry, rich sauces, pickles, and indigestible food generally, must not be indulged in. The use of ointments is generally injurious. Scratching must be avoided. In severe cases, temporary relief may be obtained by bathing the parts with alcohol and water in equal proportions; or with Mezereum lotion (one part to ten of water); or by sponging the skin, on retiring to bed, with a warm infusion made by pouring boiling water on bran. [Sedative Saxoline will be found of great value in this disease.]

The Wet Compress.—Prurigo, if confined to one or two places, is much benefited by the constant use of a wet compress over the affected part; for although it often increases the irritation at first, it finally assists nature in expelling the morbid matter.

Scratching.—Notwithstanding the incentive to scratching in Prurigo and other skin affections, the practice greatly aids in

keeping up the irritation and increasing the disease. On this point the following remarks by Dr. Tilbury Fox well express a condition we have often observed:—

"When the disease is non-contagious, secretion, if present, may be transferred (by scratching), and, when acrid, sets up local inflammation; and, when contagious, scratching is the surest method of inoculation, as in the case of the contagious Impetigo or Porrigo. Children in this way transplant the disease from the head to various parts of the body. Mothers, beyond a doubt, get it about their hands from children."

Lichen.

Definition.—A non-contagious chronic disease of the skin, characterized by the appearance of small hard papules, about the size of millet seeds, uniform, slightly red, or of the same color as the skin, closely grouped, but distinct from each other; there is itching, and the skin is generally dry and thickened. When disappearing, very fine, dry, grayish scales are formed.

The disease appears on different parts of the body, but generally on the front of the fore-arms and hands, the sides of the neck, and the face.

Varieties.—*Lichen simplex*—occurring in summer; *L. pilaris*—the follicles of the hair being the seat of the affections; *L. circumspectus* — the pimples being grouped in small circular patches, with a well-defined border, sometimes with a clear center; *L. agrius*—the most serious form of the disease, is seen in grocers, bakers, bricklayers, and washerwomen, sometimes called "baker's itch;" the pimples are very close, red, inflamed, and have a secretion, with intense itching and burning, febrile symptoms, pains in the limbs, gastric derangements, etc., and lasting, in the acute stage, ten or fifteen days; or *L. tropicus*—"prickly heat," which occurs chiefly in hot climates, attacking the parts covered by the clothes, accompanied by a peculiar tingling and pricking; the papillæ are of a vivid-red color, about the size of a pin's head, but there is no redness of the skin generally: the disease sometimes occurs in this country.

Causes.—Constitutional predisposition; irregularities in habits or diet; certain occupations, as those of cooks, bakers, grocers, etc.; hot weather or climate.

Epitome of Treatment.—Sulph. (simple); Ant.-Crud. (with

digestive derangements); Apis or Led.-P. ("prickly heat"); Ars. (*L. agrius;* chronic cases); Nux Jug., Sulph. [Alumina, Kali bich., Iodide of Sulphur, Rumex, Tilia.]

Accessory Treatment. — Simple, unstimulating food and drink; proper attention to the general health. The daily tepid bath is both preventive and curative of "prickly heat." It is seldom seen on the face, neck, and hands of persons who frequently wash those parts. See "Causes," and also "Accessory Measures," in the two previous Sections.

Pityriasis—Branny Tetter—Dandruff.

Definition.—A superficial cutaneous affection, in which there is desquamation—the skin falling off in whitish bran-like scales. Also more or less redness, itching, and heat.

The disease may occur on the head (Dandruff), eyelids, or other parts of the body. The scales are continually shed and reproduced, but there is no discharge.

Treatment.—*Arsenicum* is generally homœopathic. A dose may be given thrice daily. Graph or Lyc., [Kali Ars.,] may be given if Ars. be not sufficient.

Accessory Means.—Frequent baths, and hard rubbing after shampooing the scalp, check the formation of Dandruff there. As an application, Glycerine-of-borax is often of great service. Perfumed Carbolic Acid makes one of the best hair washes, and its occasional use tends to cure Dandruff. [An infusion of Saponaria bark acts well.]

Psoriasis—Lepra Vulgaris—Dry Tetter.

Definition.—A non-contagious cutaneous affection, characterized by well-formed, dry, and whitish scales, without vesiculation or pustulation, accompanied by cracking of the skin, and having a disposition to recur.

The general health is not appreciably affected, there being few if any symptoms beyond slight itching, which is worst at the commencement.

The cutaneous eruption which has long been known as *Lepra* is now allowed to be merely a variety or a declining stage of Psoriasis, and not a separate affection (*Tanner.*)

Varieties.—In the common form of Psoriasis there are whitish minute spots, made up of dry, silvery-looking scales, heaped together on tawny-red patches of skin about the extensor aspects of the elbow and knee, and other places where the bones are near the surface (*P. vulgaris*); when the spots are larger, they resemble drops of mortar, and are found on the breast, back and limbs (*P. guttata*); then the eruption may be more developed, and extend over a larger surface, sometimes covering an entire limb (*P. diffusa*); when the eruption runs together in a serpentine form, the scales are thin, and quickly reproduced (*L. gyrata*); when the scales are large, dry and adherent, and the patches thickened and cracked, a slight discharge may occur, causing scabs,—this is the chronic form (*L. inveterato.*)

Psoriasis progresses by an increase in the size and number of the patches, and their extension along the extremities to the trunk. On the other hand, the cure of the disease is marked by diminution of the scales, and more full exposure of the surface beneath, until gradually the eruption disappears, leaving little or no trace of its former existence. It is sometimes, however, a most obstinate disease.

Causes. — Psoriasis occurs in persons apparently in good health, but who are probably suffering from some form of defective nutrition, as too rapid growth, bad living, over-study, anxiety, prolonged lactation, etc., especially where a disposition, often hereditary, exists. The frequent use of stale dried fish, and the want of fresh unboiled vegetables, are probably frequent causes.

Treatment. — Merc., Iod., Ac.-Nit., Iris, Sulph., Lyc., K.-Hydriod., Petrol. (obstinate cases, scaly patches with deep fissures); Ac.-Carbol., Teuc., Ars. [Ars. Iod., Natrum Ars., Phos.] (chronic and inveterate cases). Ars. is an excellent remedy, and may be given for two or three months in gradually increasing doses. Veterinarians give this drug freely to horses, and it causes great improvement in their coats.

Accessory Means.—*Local.*—Warm baths; preparations of Glycerine, if the skin be much cracked, or occasional poultices if it be very hard. The application of the ointment of the Iodide of Sulphur, or Carbolic Acid and Oil [or Chrysophanic cerate,

consisting of ten to thirty grains of Chrysophanic acid to the ounce of Cosmoline], often proves most useful in Psoriasis. It should be preceded by a warm bath. *General.*—Nourishing diet, including frequent small quantities of unboiled vegetables; for growing persons, Cod-liver oil, except when stale fish is the cause. Any defects in the functions of digestion and assimilation should, if possible, be corrected. Patients who have been overtaxed in mind or body should have rest and change. The daily habit of bathing or cold sponging should be adopted, and will, to a large extent, prevent relapses. Warm or tepid soft water baths, with the use of pure soap, at bedtime, softens the scales, and promotes the healthy functions of the skin. Free out-of-door exercise is also most useful, and favors the healthy action of the lungs, liver, and the whole of the digestive organs.

Herpes—Shingles—Tetter.

Definition.—Large vesicles, or small blebs, distinct from each other (not confluent as in Eczema), occurring in patches on different parts of the body, having an inflamed base, and containing fluid,—at first clear, then milky, afterwards quickly disappearing,—and ultimately shrivelling, leaving scabs, or being ruptured, they dry up into light-brownish scabs.

Varieties.—There are four varieties. *H. phlyctenodes*, sometimes called *Nirles* –commences with a sense of local heat and inflammation; upon this ground arise round grouped vesicles, from ten to twenty, in patches varying from the size of a sixpence to that of a five-shilling piece, of which there are several, surrounded by a red areola, and mostly occurring about the face, neck, and upper limbs. *H. circinnatus, vesicular* (not the common) Ringworm—disposes of itself in rings, and *H. iris*—in the form of rainbows. [*H. gestationis* occurs in pregnant or parturient women.] *H. zoster* or *zona*, commonly called Shingles—has the nature of the first variety, but derives its name from its manner of encircling one half of the body. It is an acute disease, lasting from fourteen to twenty days, and follows the course of one or more of the cutaneous nerves, generally stopping short in the middle, though it may extend across to the other side, and has the appearance of a line of patches, like a

belt, half round the body. It generally affects the trunk, chiefly on the right side, but occasionally the face, shoulder, abdomen, or upper part of the thigh. Herpes frequently appears on the lips of persons suffering from Pneumonia, Intermittent Fever, Ephemera, and epidemic Cerebro-spinal Meningitis. It is most common in the young, particularly during change of weather, and is often preceded by neuralgic pains, the eruption following in the same locality. In some rare cases, Ulceration may supervene; there may be much pain, smarting, or burning; and the scars may remain for some time. There is a remarkable connection between *Herpes zoster* and the nervous system: the latter always determines the seat of the former; and it is now well established that it depends upon disease of the trophical fibres of the motory and sensory nerves supplying the part. Zona is much dreaded, and uninstructed nurses foolishly state that if the patches extend round the body, death is certain to result. There is, however, no danger, unless the patient be very old and feeble.

General Symptoms.—In addition to what is stated above, there is often a feeling of *malaise*—feverishness, Headache, shivering—and, perhaps, neuralgic pain in the side (*Pleurodynia*), which may be very acute, especially in Shingles. The disease is mostly accompanied by sensations of heat, tension, burning, and felt even before the appearance of the eruption, and is followed by weakness and depression. When the disease occurs in the aged, or in persons of feeble constitution, there is much debility, and Ulceration may arise, further debilitating the patient.

Cause.—*Irritation of the nerves,*—as when Catarrh affects the air-passages, and Herpes is developed on the nose or lips; or during the course of other diseases.

Epitome of Treatment.—*1. Earliest Symptoms.*—Acon. (with neuralgia consequent on anxiety, etc.).

2. Developed Herpes.—Rhus (in all simple cases); Sulph. (to follow Rhus if necessary); Ars. (Neuralgia, and in debilitated constitutions); Phyto., Graph. (ulcerous conditions, and in old persons); Phos. (consumptive patients); Tellur., Phos., Sep. (Herpes circinnatus).

[Cistus. (on the back, with neuralgia); Comocladia (on the legs);

Kalmia (facial neuralgia); Mezereum (in old people); Semper tect., (in obstinate cases); Zincum (neuralgia).]

3. *Pleurodynia.*—Ran.-Bulb.

4. *Additional Remedies.*—Mang., Staph., Cist., Nat.-Mur., Comocladia.

Accessory Measures.—The daily bath; plenty of out-door exercise. For local application, see "Glycerine." [Applications of chaulmoogra oil, and the use of the galvanic current, will prove useful in zoster.]

Eczema — Catarrhal Inflammation of the Skin — Milk-crust.

Definition.—Eczema (Crusta Lactea, moist Tetter), is essentially a Dermatitis or catarrhal Inflammation of the skin characterized by more or less superficial redness, of small closely-packed vesicles, usually not larger than a pin's head, which run together, burst, and pour out a serous fluid, that dries into thin yellow crusts. The exuded fluid has the property, when dried, of stiffening linen, which distinguishes this from other skin diseases. Pain, smarting, or itching, are also present.

Eczema is one of the most common eruptions, constituting one-third or more of all skin affections; it lasts a varying time, in consequence of successive local developments, and its tendency to spread. After its disappearance no traces are left of the disease.

Symptoms.—The most usual is a red surface with vesicles or fissures from which the serous fluid exudes. A great plane of interwoven capillaries renders the skin very vascular, and gives rise to a copious exudation. The deeper layers of cuticle, including that lining the sweat ducts, appear most implicated. The vesicles appear in successive crops, may prolong the disease for an indefinite time, and are attended with itching and local heat. The skin is irritable; occasionally excoriations or crackings of the part occur, and sometimes the parts around the patch inflame, probably from the irritating nature of the discharge. If no vesicles be apparent, the disease may be recognized by the skin feeling thick when raised by the finger and thumb, by the starchy nature of the discharge, the formation of thin yellow crusts, and the irritation. The most common seats of the patches

are the scalp, behind the ears, the face, the fore-arms, and the legs, and its appearance differs greatly in each of these locations. If the disease be extensive, there may be considerable fever, a pallid appearance, Headache, loss of appetite, etc. The mucous surfaces may become the seat of Inflammation, either by the spread of the disease from the skin or as a consequence of the general condition. The retrocession of Eczema may be followed by other diseases—Diarrhœa, Bronchitis, or Leucorrhœa in the female.

Varieties.—The chief are *E. simplex*, in which the Inflammation and irritation are moderate. This variety often results from exposure to the sun's rays; or it may be caused by irritants—heat, cold, bad soap, etc. If it occur in hot weather, the patient complains of fever, a "heated state of the blood," etc., and the eruption follows, appearing on the exposed parts of the body—the face, neck, arms, back of the hands, etc.: this condition is commonly called "heat-spots." *E. rubrum* is a more highly inflammatory variety, the eruption being very red and shining, and there is much general disturbance; the burning is severe; brownish scabs are formed; and the parts usually affected are the flexures of the body—the inner side of the thigh, groin, elbow, wrist, etc.: it is apt to become chronic in old persons, and when it occurs about the legs is called "the weeping leg," and often leads to Ulcers. It often occurs on legs affected with varicose veins. *E. impetiginodes* is the variety which occurs in lymphatic and debilitated children, especially in those who have a tendency to the formation of pus; the discharge is soon mixed with pus, which forms greenish-yellow thick scabs: it is commonly seen on the heads of infants, and is a combination of Eczema and Impetigo. *E. chronicum* is the common form of any of the foregoing kinds of the disease; it often oscillates between cure and recurrence; and the skin becomes harsh, dry, red and thickened. Syphilitic or scrofulous complications render the disease very intractable.

Causes.—Eczema probably depends upon constitutional irritability, and is sometimes hereditary; hence trivial exciting causes are sufficient to develop the disease the action of the sun's rays, heat, cold, the use of cosmetics, paints and washes, and stockings

dyed with aniline, etc. In adults, it is a common sequel to over-work, anxiety, irregular habits, etc. The strapping of ulcerated legs with plaster, especially if there be Varices and an irritable constitution, is sometimes a cause. The rash developed by sulphur-baths, the rubbing in of Croton oil, and also that following hydropathic treatment, is eczematous. Shoemakers, who sit long with their thighs together, grocers and cooks, from handling sugar, etc., washerwomen, from the frequent use of soda and soap, bricklayers and builders, from the contact of lime, and others, from similar causes, are liable to Eczema. In infants it is often due to friction and irritation of clothes wet with urine, improper food, impoverishment of the mother's milk, or want of attention to her general health. It is impossible to over-estimate the influence of improper diet in the production of Eczema.

Epitome of Treatment.—1. *Earliest symptoms, and in Eczema simplex.*—Acon. in alternation with Rhus; Canth., Sulph.

2. *E. rubrum.*—Ant.-T.; Ars. in alternation with Bell.; Crot.-Tig. (if there be sickness or painful Diarrhœa); Merc.-S., Hep.-S., K.-Bich., Calc.-C., Ac.-Nit.; Crot.-Tig.* 2x may be applied externally, and often exerts a marked favorable action.

3. *E. impetiginodes* and *chronicum.*—K.-Bich., Crot.-Tig., Ars., Merc., Hep.-S., Calc.-C., Sil., Nux Jug., Viola Tric., Lyc. (Milk-crust) Merc. precip. ruber (fissured). When the scalp or other hairy part is affected, Carbolic-acid ointment (one drachm to pure lard one ounce) for neutralizing the fœtor, and destroying pediculi. The hairs should be clipped short, and semi-purulent scabs removed by bran-poultices, and steeping with the water in which that material has been boiled. Mashed turnip poultices are also recommended.

Accessory Measures. The parts should be kept clean by frequent gentle washing with cold or tepid soft water. General baths are of the greatest utility in Eczema, as in all other chronic skin disorders, for they stimulate the healthy surfaces to increased activity, and so compensate for the imperfect action of the diseased portions. The great vascularity of the skin, its large daily secretions, and its breathing power in aid of the lungs, prove how corrective the healthy play of its functions must be in cases of

*The homœopathicity of Croton is shown by the fact that rubbing in of this oil quickly develops an eczematous rash.

threatened mischief to the internal organs. Perhaps there is no hygienic habit inculcated in this work commensurate in value with the morning bath, taken in one of the forms and according to the principles enunciated in the first chapter.

Pure soft water is an agent of great value, and in many cases the only remedy needed. Hard water is irritating, and when rain water cannot be obtained, it may be softened by boiling, and the addition of bran, flour or other mucilaginous matters, which further abstract the lime salts. The washing should be done so as not to spread the irritating discharge over unaffected surfaces, and afterwards well dried by pressure with a soft cloth, not by rubbing; Petroleum Soap, or Transparent Soap, is recommended to be used in washing. Crot.-Tig., 2x or 3x dil., may be used as a direct application afterwards: often a single application will suffice, or at most two or three. Soft water compresses, especially in the earlier stages of the disease, are very useful. In the weeping stage of Eczema, when the inflammation is but moderate, Carbolic acid ointment (Ac.-Carbol 20 drops, lard 1 ounce) allays the itching and hastens recovery. To relieve the irritation, Bismuth ointment (Bism. 1 drachm, lard two ounces) is invaluable. [Oleate of Zinc may also be of service.] Varicose veins, and the consquent congestion usually lead to Eczema, as well as other eruptions on the legs, and suggest the value of elevation as an element of treatment. The clothes should not be allowed to produce friction on the parts. Vegetable food, especially such as is eaten uncooked—lettuces, celery, watercresses, etc.—may be taken, for vegetables contain potash salts, which are abstracted in the process of boiling. The general health must also be regulated. Cod-liver oil is especially recommended.

Impetigo.

Impetigo, a common disease of infants, is a severe, sometimes contagious, purulent inflammation of the skin, and has been described as Pustular Eczema by some writers.

Symptoms.—The disease is characterized by an eruption of small semicircular, flattened pustules, grouped in clusters, having a tendency to run together, forming thick and moist yellowish scabs or incrustations; and attacks the ear, nose, scalp and face. In

children, the eruption and its yellow tenacious secretion sometimes cover the face or head like a mask, the discharge matting the hair together into a sour-smelling mass, beneath which the surface is red and tender. It is this form of the disease to which the term *Crusta lactea* (milk-crust—*Porrigo larvalis*) is most correctly applied.

Causes.—Poor diet; strumous disease, and irritations of the skin; infection.

Treatment.—Viola Tric. for simple Crusto lactea; Ant.-T., K.-Bich,. Ant.-C., or Ars. When the scabs get thick and hard, they should be softened with fresh butter, and then removed by means of poultices of bran or linseed-meal, and carbolic-acid ointment be kept smeared over the part for a week afterwards. Ung. Hydrarg.-Nit.-dil. is an excellent local application. See also Section on "Eczema."

Acne—Pimples.

Definitions. — "A chronic Inflammation of the sebaceous glands and hair-follicles, characterized by an eruption of hard, conical, and isolated elevations of moderate size, and various degrees of redness."

Names and Varieties. — The word "acne" (which in all probability was given in error for acme) was intended to signify the occurrence of the disease at the acme of man's development—puberty, when, indeed, the simple form is most common. In *A. punctata* there is simply a collection of sebaceous or suety matter, in the form of a pointed eruption: this collection, when squeezed out of the skin is emitted in a cylindrical form, having the appearance of a small grub or maggot (comedones); it is most frequent in young females. *A. indurata*—sometimes called "stone-pock"—describes the disease when it is chronic and indolent, and when the pimples are become hard, with a dusky-red base; they are often painful, and produce a sensation of tightness about the face, the skin being congested and thickened. *A. rosacea* is seldom seen in young persons, but sometimes occurs in women in whom the catamenial function is imperfect; the redness is bright, there being much congestion; the veins are varicose, the face is much disfigured, the surface is red and dotted over with pustules, the skin is

thickened, and food and stimulants produce great burning and flushing of the face. Alcohol, by flushing the face, causes what are termed "rosy-drop," "grog-blossom," etc., which are spots of Acne. "The physiognomy of the disease," writes Professor Wilson, "is made familiar to our minds by the words of Shakspeare, when he tells us with regard to Falstaff, that—

'His face is all bubukles, and welks, and knobs, and flames of fire.'

And in a few words the rosy spot may be said to be a protest of the fifth pair of nerves against ill-treatment received by the gastric portion of the eighth."

It must, however, be remembered that the disease is not necessarily connected with frequent alcoholic stimulation, since it sometimes occurs in the abstemious. A. *strophulosa* (*Strophulus albidus*)—"white Gum-rash"—consists of small white pimples, chiefly about the face and neck.

Occasionally, in uncleanly persons, an acarus is discovered in the sebaceous follicles, called the *Demodex folliculorum.*

Causes.—Congestion of the sebaceous follicles. This condition may be induced by various internal and external agencies; by the stomach, which has a great reflex action on the face, as seen in flushings after food, etc.; by enervation, intemperance, Constipation; physiological changes (as puberty); menstrual irregularities, and sexual abuse by young men; cold; the use of cosmetics; neglect of cleanliness, etc. It is of most frequent occurrence in the spring season, and then often returns for several successive years. According to Dr. Tilbury Fox, lymphatic persons, and those of a phthisical tendency, are most prone to Acne.

Epitome of Treatment.—1. *Acne punctata in Young Persons.*—Bell. (bright-red pimples; and in plethoric persons, with scarlet flushings); Puls. (females with usually cold, pale face, menstrual irregularities); Ac.-Phos. (weakly persons); Bary.-Carb. [Sumbul.] (maggot-pimple); [Natrum Mur. with seborrhœa; Chel. Maj., (liver derangement);] Bor.

2. *A. indurata.*—Sulph.; [Bovista, Granatum, Ledum, Robinia Rumex]; Calc.-C. (with chronic acid Dyspepsia); Iod. K. Brom. has great power over this affection, and the medical journals report cases in which long-continued Acne has entirely disappeared while this drug was being taken for other diseases. On

the other hand, twenty-five-grain doses, thrice daily, have been known to develop an eruption of Acne.

3. *A. rosacea.*—Ant.-C., Rhus, Nux Jug., Carbo An., Jug.-C.; Opi. (dusky-red bloated appearance); Nux V. (Dyspepsia, Constipation, etc.); Ars. (chronic or severe cases, with debility); Agar. The last four remedies are also well adapted to the condition when produced by alcoholic toxication. [Bromide of Arsenic, Petroleum, Rhus, Rad.]

4. *A. strophulosa.*—Ant.-C., Calc. C., Hep.-S.

Accessory Means.—Hygienic measures and the correction of faulty habits are of the first importance in chronic Acne. Indigestion, menstrual derangement, debility, or any other constitutional or local affection associated with Acne, should be corrected.

The diet should be simple and frugal, and uncooked vegetables and fruits freely eaten. Daily out-of-door exercise is favorable to the cure. Soft-water baths are of great value in this affection, although on first commencing them they may appear to aggravate the disease. In addition to the morning general cold-bath, the parts should be frequently washed or douched with hot water. Acne *punctata*, according to Ringer, is efficiently treated by washing the face or other part affected with hot water and plenty of soap several times a day. The orifices of the sebaceous follicles are kept open, and the accumulation of superabundant secretion prevented. If by this treatment the skin becomes rough, red, and painful, it should be well rubbed with Glycerine of starch after each washing. All cosmetics, paints, etc., must be avoided. Vigorously brushing the nodules with a tooth-brush and soft-soap is said to be exceedingly efficacious.

A lotion (one part to twenty of water) of one of the following drugs, according to the indications, often relieves irritation and hastens the cure: Bor., Sulph., Agar., Rumex, or the dilute Ac.-Phos.

Sycosis—Mentagra—Barber's Itch [Tinea Tricophytina.]

Definition.—Inflammation of the hair-follicles of the beard and whiskers not associated with Syphilis.

It is a kind of "Acne of the beard." The name *Sycosis* –fig-like—was given to the disease from its supposed resemblance, when fully developed, to the inside of a fig.

Dr. Fox and others hold that Sycosis is altogether a parasitic disease, and hence call it *Tinea Sycosis* [the parasite is the *trichophyton.*] Sycosis is transmissible by contagion, from the use of a razor previously employed in shaving an affected person. Bad cases of *Sycosis Contagiosum* have been recorded from the use of razors that had immediately before been used in shaving persons with "bad chins." This method of transmission has been often noticed, and we call attention to it to suggest the preventive means—viz., the immersion of the razor in hot water and wiping it before use.

Symptoms.—It is a disease of adult life; it commences insidiously, a red, itchy patch being first noticed, which, after rubbing or scratching, and the lapse of a little time, becomes much more troublesome, as the follicles enlarge and pustulate; there is considerable sensation of burning, and shaving is very painful. Successive crops of pustules appear, often grouped together, the fluid exuded becoming dry, and forming into crusts. The hairs become dull, brittle and easily removed; and much discomfort, and sometimes disfigurement, is the result. The disease is very apt to become chronic, recurring at certain seasons.

Treatment.—The disease is often very obstinate. The remedy which has been found most curative is Ant.-T., used internally and externally. Lyc. and Ant.-C. have been suggested; but we have found no benefit from the latter. [Merc. precip. Rub., Kali Bich., and Cicuta, often prove useful.] As an external application, we can recommend the following preparation:—Ant.-T. one-half grain, warm water one-half ounce; when the Antimony is fully dissolved, add Glycerine one-half ounce, and, after first washing and well drying, apply to the affected parts twice or thrice daily. In practice we have not found epilation necessary. The general health should be improved.

Should the disease resist this treatment, the existence of a parasite may be inferred, and Sulphurous Acid, or dilute Carbolic Acid [or a weak Merc. Corr. lotion], should be applied locally, by means of an atomizer, several times a day, for a short time. [Epilation should precede the use of the spray.]

Chilblain.

Definition.—A low kind of Inflammation of the skin, generally affecting the hands or feet, attended with itching, tingling, burning, swelling, and sometimes Ulceration.

Chapped Hands.—This affection consists of slight inflammation of the skin of the back of the hands, which becomes cracked or "chapped." It occurs in frosty weather, when it sometimes gives rise to much inconvenience and pain. It requires similar external treatment to Chilblains.

Causes.—Exposure to cold, damp, or to sudden changes of temperature; warming the hands and feet by the fire when cold or damp. Delicate persons, with a constitutional predisposition to skin-disease, are chiefly affected.

Epitome of Treatment.—1. *Simple Chilblains.*—Arn.; Tamus Communis tinct. as a paint; Bell. (bright-red shining swelling, and pulsative pains); Puls. (blue-red appearance, pricking-burning pains, worse towards evening); Rhus (inflamed Chilblains with excessive itching); Canth.; Sulph. (great itching increased by warmth; obstinate cases; and to remove the predisposition).

2. *Broken or cracked Chilblains.*—Petrol. (general unhealthy state of the skin, with a tendency to fester); Bell., Agar., Rhus.

3. *Ulcerated.*—Ars. (burning pains); Petrol.; Phos. (fœtid discharge, and when occurring in unhealthy subjects); Kreas., Ac. Nit.

4. *Frostbite.*—The part should be well rubbed with snow, afterwards with cold water, in a room without a fire, to prevent too sudden reaction.

Local and General Treatment.—All the remedies prescribed may be used both internally and externally—in strong tincture or a low dilution, according to the power of the drug, either in the form of lotion or cerate. Arnica lotion or cerate should never be used for broken Chilblains. Tamus Communis, externally applied, in the case of unbroken Chilblains, is an almost infallible cure. Glycerine, Glycerine of starch, or one part of Glycerine mixed with two parts of Eau-de-Cologne, form an excellent remedy for Chilblains, Chapped hands, fissures or cracks. It removes the stinging, burning sensations, and makes the parts soft and supple. Ulcerated Chilblains require a poultice, or other mild application,

until relieved. The soreness of Chilblains and Chapped hands may be removed or mitigated by applying soft linen rags squeezed out of cold water, and then covered with oiled silk. This compress should be applied on going to bed; it equalizes the temperature of the part, improves the nutrition of the skin, and diminishes the tendency to the re-formation of Chilblains.

Preventives.—As Chilblains generally occur in persons whose circulation is defective, regular exercise in the open air, the free use of the skipping-rope, and wholesome, nutritious diet, are necessary to prevent their recurrence. Pork, salted meats, and all irritating or indigestible articles of food, should be excluded from the dietary. Extremes of temperature are to be avoided; also cold stone floors, and suddenly approaching the fire after coming in from the cold, or warming the feet on the fender, or the hands close to the fire.

[Tincture of Benzoin, painted on the parts, morning and evening, acts as a preventive. Slapping the feet to increase the circulation has been found of great benefit.]

Ulcer.

Definition.—A breach of any part of the cutaneous or mucous surface, caused by the stripping off of its proper cuticle or epithelium, or by the destruction of a portion of its substance by disease or injury. Ulceration is the progessive softening and disintegration of successive layers of the ulcerating tissue, and is attended with a secretion of pus, or other kind of discharge.

Varieties.—The healing Ulcer is that in which the granulating process goes on uninterruptedly to reparation; the inflamed Ulcer is hot and painful, with a red, bleeding surface, and a thin ichorous discharge; the indolent Ulcer is marked by an imperfect form of organization, so as to be incapable of healing; the fistulous Ulcer consists of a narrow channel, with a false mucous membrane, produced by Abscesses which have not healed from the bottom; the spreading Ulcer is that in which the destructive process which formed it, still existing, causes it to extend; the varicose Ulcer, which generally forms on the lower extremities, is the consequence of a varicose condition of those parts. There are also other varieties.

Causes.—A bruise, or burn; constitutional derangement from inflammation, improper food, etc.; or Ulcers may be openings by which nature rids the system of products which, retained, would produce serious disturbances. "The constitutions most liable to ulceration are those which are debilitated by intemperance or privations, tainted with Syphilis or Scrofula, or broken down by the excessive use of Mercury, or in which the blood is impure from inaction of the liver, skin, and kidneys. The parts most disposed to it are those in which circulation is most languid, such as the lower extremities. On this account tall persons are more frequently affected with Ulcers than short" (*Druitt*). Ulcers over the subcutaneous surface of the tibia are more difficult to heal than similar ones situated over the fleshy parts of the leg.

Treatment.—Strictly constitutional treatment is generally necessary. This may be illustrated by the fact that the appearance presented by a sore often furnishes an excellent test of a patient's health: a weak or indolent Ulcer rapidly assumes a healthy aspect on any improvement of the constitutional powers of the patient; on the other hand, a healthy sore immediately becomes indolent, or sloughs, when any extreme depressing cause comes into operation.

Belladonna.—Painful Ulcer, with surrounding redness.

Silicea.—Simple Ulcer; and in chronic cases.

Kali Bich.—Ulcer on the leg, deep, with hard base and overhanging edges. This remedy may also be used externally (one grain with four ounces water).

Hydrastis Canadensis.—Unhealthy Ulcers; Ulcerations of mucous surfaces—the mouth, throat, nose, eyes, etc. It should be administered internally and applied locally as a gargle or wash, as the case may require.

Arsenicum.—Inflamed ulcers with burning pain, raw surface, or presenting a livid appearance, and easily discharging blood or thin fœtid matter, and often with general indifferent health. This remedy is specially valuable in indolent Ulcers of the legs, and should also be used in the form of a lotion.

Rhus, ext. and int.; Polygonum and Ammon.-Mur. have cured superficial Ulcers and sores on the lower extremities.

Hep.-S., Calc.-C., or Sulph.—For constitutional ulcers, and to improve the health. Also Ferr.-Mur. (as a paint).

Local Treatment.—The Ulcer may be cleansed with dilute Carbolic Acid, and covered with a little soft linen or lint wet with cold or tepid water, as is most agreeable to the patient, covered with oiled silk, and lightly bound over with a bandage. Sometimes it will be desirable to use Calendula lotion (thirty drops of the tincture to a teacupful of water), or some other soothing application; but in the majority of cases the simple water-dressing is sufficient. In addition to the above treatment, bandages are more or less necessary in all Ulcers on the legs, unless absolute rest, with the elevation of the foot above the level of the hips, can be enforced. Laced stockings or elastic stockings, are convenient substitutes for the bandage, and are more easily applied. The frequency with which the dressings should be changed depends on the amount of the discharge. If that is considerable they should be changed once or twice daily; otherwise three or four times a week will suffice. In the treatment of Ulcers on the leg, as, indeed, on every other part, undeviating cleanliness is essential. The uncleanly habits of many persons, who allow their feet and legs to remain unwashed for weeks together, induce an imperfect vitality of the skin, which favors Ulcers, and renders them disagreeable and obstinate in their results. Washing the lower extremities daily is one of the most potent means of preventing and curing the disease, and restoring the lost vitality of the parts.

As much open-air exercise should be taken daily as is consistent with the patient's strength; but he should not stand much, nor sit with his legs hanging down.

Boil.

Definition.—A hard, conical, painful tumor, involving the under surface of the true skin and the subcutaneous areolar tissue, which suppurates imperfectly, and contains a central slough or core, arising from deposit of unhealthy lymph in the part.

Symptoms.—A small, tense, inflamed and painful swelling, the size of a split pea; this hardens, and the red blush around its base changes to purple. In a few days the swelling enlarges,

owing to the formation of pus; and the pain becomes throbbing; the tumor bursts, and the core is discharged.

Blind-boils do not suppurate, but slowly subside. Boils often appear in crops, or another appears as soon as the preceding one has healed. They generally occur in the thick skin of the neck, back, nates, or arms, especially in the young.

Causes.—A disordered condition of the blood, from unwholesome food, overwork, anxiety, or some unknown atmospheric causes, or from depressing influences generally.

Treatment.—*Belladonna.*—Painful, hot, shining erysipelatous swelling, with Inflammation round the base. Dr. Hughes states that a Boil in the stage of inflammatory engorgement, before matter is formed, may almost always be blighted by repeated doses of Bell. (1x). Dr. Simon says the inunction first of a few drops of Tincture of Camphor, then of olive-oil, is equally abortive. Later still, states Dr. Madden, its progress may be arrested by Sil. (3x trit.)

Hepar Sulphuris.—To facilitate the suppurative process and, to a great extent, prevent its subsequent extension.

Silicea.—Indolent and chronic Boils.

[*Gels.*—For large Boils.

Cina.—In children.

Nux jug.—Indurated Boils.]

Ac.-Nit.—In some debilitated persons this remedy is required; it is very valuable in wounds which fester, and when fungoid excrescences form. An aqueous dilution may also be applied topically.

Sulphur, morning and night for eight or ten days, to prevent a recurrence [also Calc. Mur.] Hughes states that if Boils recur again and again, the constitutional tendency may be checked by a course of Sulph., and that he finds no need for any other medicines for Boils than Bell. and Sulph.

General Treatment.—As soon as the swelling points, indicating suppuration, a poultice, covered with oiled silk, should be applied and renewed frequently, until suppuration is completed. In the early stage, a cold compress should be used. When Boils are of an acute variety, and the skin covering them is very thick, a free incision with a sharp knife will do good service. For treatment of proud-flesh see Ac.-Nit. above.

Boils may be prevented from coming to a head by gently rubbing the surface every three or four hours with the tips of the fingers wetted with spirits of camphor or tincture of arnica.

In order further to prevent a recurrence of Boils, attention must be directed to the constitutional causes in which they originate. If, as is often the case, they arise from digestive derangement, abstinence from rich gravies, pastry, sweet-dishes, etc., is imperatively necessary. Correct diet, cleanliness, and healthy exercise and recreation in the open air, will do more towards eradicating a predisposition to boils and other affections of the skin than any of the drugs we have mentioned.

Carbuncle—Anthrax.

Definition.—A malignant Boil, marked by a circumscribed Inflammation of the subcutaneous cellular tissue, of a flat circular shape, varying in size from one to six inches in diameter, or even larger; it is of a dusky-red hue; hard, very tender, and painful. It generally occurs on the posterior portions of the neck or back, where vitality is less active.

Symptoms.—It appears first as a hot, hard swelling, harder than a Boil, accompanied by a burning, dull, throbbing sensation. As the red swelling gradually increases, the skin covering it assumes a purple or brownish-red tint, and, in a few days, softens, suppuration taking place at several points. The matter is thin, watery, and scantily discharged; but if pressure be applied, a thick glutinous fluid may be squeezed out. It is generally attended by considerable constitutional disturbance and depression; if large, and especially if seated on the head, there is violent fever, Delirium, and great and even fatal prostration may result.

Diagnosis.—Carbuncle differs from a Boil in its greater size; its broad, flat shape; in usually appearing singly; in giving way and discharging from several openings; in the dusky redness of the inflamed integument; and in the great constitutional disturbance and irritation which accompany it.

Causes.—A disordered condition of the blood, usually met with in a debilitated state of the constitution, as the result of chronic exhausting diseases, or severe, acute maladies; great alteration in habits or diet; long-continued fatigue, etc. Unlike Boils, Car-

buncle is rare in young persons, being usually met with in debilitated persons who have passed the middle period of life, and more frequently in men than women.

Treatment.—The chief remedies are—Anthracinum, Ars., Bell., Apis, Acon., Sil., Carbo V., Lach., Sulph.

Leading Indications.—*Aconitum.*—Severe inflammation and fever. Acon. may precede, follow, or be alternated with any other remedy.

Arsenicum.—Large, painful, malignant Carbuncle, with great constitutional prostration. Often the best remedy.

Lachesis.—Low, inflammatory type of the disease, with evidences of the poison of the tumor extending to the blood; cerebral symptoms.

Apis.—Continuous extension of the erysipelatoid Inflammation.

Silicea.—To promote healthy granulations, etc.

Local Treatment.—Early fomentations, followed by a linseed or bread-and-milk poultice, will mitigate pain by relieving tension, and hasten the cure. In many cases the simple cold-water compress is the best local application. In some cases, incisions are necessary; but in the absence of great tension, severe pain, or extension of the Inflammation, the care of these tumors may be safely confided to nature, attention being directed to such constitutional treatment and soothing applications as each particular case may require.

If there be any signs of putrescence, a yeast poultice should be applied, and sprinkled over with a powder of the 1x trituration of Carbo Vegetabilis, or of crude powdered charcoal. This should be renewed every six hours, till the parts assume a more healthy appearance.

Recently a method of treatment by strapping has been adopted with great success, and is a far safer and more rapid plan than by incision or cauterization. The sides of the Carbuncle are drawn together by tightly-applied broad strips of adhesive plaster; the plaster should be removed daily, and any discharge that may have exuded sponged away with warm water. The enlargement of a Carbuncle may be considerably curtailed by early strapping.

Diet.—The diet should be nourishing, and include Essence-of-Beef, Cod-liver oil, etc. In debilitated cases, the brandy-and-egg,

or milk-and-egg, mixture generally does good; but, in many cases, alcoholic drinks are best avoided.

Whitlow—Felon—Gathered Finger.

Definition.—A painful inflammatory swelling at the end of a finger or thumb, having a tendency to suppurate, and, in debilitated constitutions, to recur.

Varieties.—The cutaneous Whitlow is an inflammation of the surface of the skin, with burning pain, and effusion of a serous or bloody fluid, which raises the cuticle into a bladder. The subcutaneous is attended with great pain and throbbing, and suppuration under the skin at the root of the nail, which often comes off. Tendinous Whitlow, or Thecal Abscess, is inflammation of the tendinous sheath of the finger. When Whitlow is malignant, pressing on to the periosteum, it is sometimes called Felon.

Causes.—Cutting the nail to the quick; a bruise, burn, or other mechanical injury; the introduction of poisonous or acrid matter into scratches on the finger; constitutional disorder.

Symptoms.—Heat, pain, throbbing, and redness at the end of the finger; as the symptoms increase, there is swelling, tension, and pain extending up the arm; the surface becomes livid, and shortly assumes a pale cloudy appearance. If suppuration occur, a dirty-looking fluid is discharged; subsequently the nail falls off; and if the finger be kept at rest, and the health be not very defective, a new nail is produced, and the finger is well. But under unfavorable conditions, the part may ulcerate, the finger inflame, the bone become diseased, and phlegmonous Inflammation attack the arm.

Treatment.—As soon as the first indications of Whitlow are noticed, the finger should be repeatedly plunged into water as hot as can be borne, in which common salt has been dissolved for two hours or longer; the hand should be held in a raised posture, and a dose of Silicea taken every three hours. Thus its formation may often be prevented. If these means be commenced too late, a warm bread-and-milk poultice should be applied, and Sil. continued every four hours, in alternation with Acon. when there is much feverishness, or Bell. when the inflammation is erysipelatous. Merc., Hep.-S. and Dioscorea are also good remedies.

Accessory Means. — Hot fomentations to relieve pain. If inflammatory action persist, the finger becoming hard, and there be no signs of early suppuration, a free incision should be made to relieve tension and prevent sloughing, and, possibly, disease of the bone. In opening Thecal Abscesses the incision should be made strictly in the middle line to avoid the digital arteries which run along the sides of the fingers. The opening should also be made between, but not over, the joints.

Onychia is Inflammation of the nail-matrix (the substance from which the nails grow); it may be induced by similar causes to those of Whitlow, and especially by an in-growing nail, or cutting the nail down to the quick.

In-growing of the nail (*Unguis involutus*) may be remedied by softening it in warm water, then paring it thin on the upper surface, and cutting it down as far as may be at the middle part of the extremity, avoiding cutting the parts which tend to grow in. By these means the growth is diverted from the sides; since a nail will grow most where it is cut most. Painting daily with a solution of Perchloride of iron is also of great service.

Corn.

Definition.—A small thickened mass of epidermis accumulated on the dermis in situations where the papillæ, subjected to undue pressure, or friction, or both, have acquired unnatural proportions. It not only lies upon the dermis, but penetrates into it. A Corn may be hard, dry, and scaly; or, if situated in places where the secretions of the skin are confined, soft and spongy. When inflammation or suppuration takes place underneath a Corn, the Corn becomes excessively painful.

Callosity is a hard, thickened condition of the skin, covering a larger extent than a Corn, and may sometimes be seen on the front of both shins.

Causes.—Pressure from tight-fitting boots or shoes; or high heels, which throw undue weight upon the toes; hereditary predisposition sometimes seems to favor their development.

Treatment.—As soon as a Corn appears, the surrounding skin should be softened by a warm foot-bath, the hard head of the Corn gently extracted with the finger-nail or some convenient

instrument, and the thickened skin pared off, wounding the adjacent parts as little as possible. The Corn should then be dressed with Arnica lotion (fifteen drops of the strong tincture to half a wine-glassful of water), and next morning a piece of Arnica-plaster, or an Arnicated corn-plaster, applied; or it may be painted with Ferrum-Perchlor., or Castor-oil. The dressing may be repeated several times, till the inconvenience is removed. The Arnicated amadou, or felt-plaster, having a hole punched in it to receive the Corn, so as to protect it from pressure, is a useful contrivance.

If internal treatment be necessary, Calcarea and Sulphur are generally suitable medicines. Calcarea may be administered every morning and night for a week or ten days; then, after waiting a day or two, Sulphur in the same manner. Afterwards, if necessary, the course may be repeated.

Soft Corns are best treated by carefully cutting off the thickened skin with sharpened scissors, then applying a drop or two of diluted tincture of Arnica, and always wearing a layer of cotton-wool between the toes, changing the wool daily.

Accessory Means. — Corns can be permanently cured by wearing easily-fitting boots, [wide on the toes,] often washing the feet, and frequent change of stockings.

Enlarged Bursa—Housemaid's Knee—Miner's Elbow.

Definition.—Inflammation of a bursa, with increased accumulation of synovial fluid. The bursæ most commonly involved are those on the metatarsal joint of the great toe, called "Bunion;" of the knee-joint, called "Housemaid's Knee;" and of the elbow, called "Miner's Elbow."

Causes.—Kneeling or reclining on hard damp stones, pressure, blows, excessive use, and oblique traction of the skin in moving from side to side—*i. e.*, friction.

Symptoms.—Swelling and tenderness over a joint. In acute cases the pain is very severe, and there are much effusion, swelling, and fever; even suppuration may result. In chronic cases, a permanent swelling, from the size of a small egg to that of a large orange, gradually forms. The swelling is at first soft, but if neglected, the sac may thicken, be interspersed with fibrin-

ous bands, and the bursa gradually pass into the form of a solid fibrous tumor.

Remedies.—*Arnica.*—Cases arising from friction or bruises.

Aconitum.—Much febrile disturbance.

Belladonna.—Considerable heat, redness and swelling, with lancinating pains.

Rhus.—Pain worse when sitting, and when warm in bed.

Ledum.—Pain, etc., with chilliness.

Iodium.—Chronic Bursitis in patients subject to glandular enlargements.

Kali Hydriod. — With rheumatic complications. Graph. (chronic cases with redness); Agar. (itching); Hep.-S., or Sil. (tendency to suppuration); Bry. (shooting pains).

A lotion of Acon., Bell., Bry., Led., Rhus., Iod., Agar., or Arn., should be used when the same remedy is being administered internally.

Surgical Treatment. — If the above remedies are unsuccessful, the late Mr. Skey's plan may be tried as follows:—A stout thread of silk should be passed through the center of the tumor, the effect of which, in a few days, is to convert the bursa into an abscess, which, when mature, should be opened. The thread should be removed from the wound after the exudation of pus from the orifices made by the needle. Opening the bursa with the knife, and painting the inside with Iodium, is, however, a more satisfactory operation. When the tumor is solid, excision is the most effectual method, and one accompanied with little risk.

Bunion.

Definition.—An enlargement of the bursa, usually on the metatarsal joint of the great or little toe, chiefly the former, with more or less deformity of the joint.

Causes. — The pressure of narrow-toed boots or shoes, throwing the great toe over or under the contiguous toes; in this way a sharp angle is made on the inner side of the joint of the great toe, on which the Bunion is formed.

Symptoms.—Pain, redness, and swelling of the part, which soon subside on removal of the cause. Should, however, undue pressure be continued, the symptoms increase until pressure

becomes unendurable. After this, on discontinuing the offending boot or shoe, the pain subsides; nevertheless a permanent Bunion has been formed, and inflammatory symptoms are at any time liable to recur from irritation.

Treatment.—The direction of the toe must be changed by wearing properly-shaped boots, made with the inner side of the sole straight from the toe to the heel. If irritation be accidentally excited in the part, a warm foot-bath should be used, and afterward a lotion (twenty drops of tincture of Arn. to two tablespoonfuls of water) continuously applied for two or three days. If the patient has the least erysipelatous tendency, Ruta should be substituted. Should matter form, a linseed-meal poultice will be more suitable; at the same time, Hep.-S. may be given every four hours.

Ver.-Vir., painted on Bunions, generally gives rapid and perfect relief. There is no agent comparable to Ver.-Vir. for Bunions or inflamed Corns.

Prevention.—If the Arnica or Ver.-Vir. lotion be used immediately the first inflammatory symptoms arise, and all undue pressure be at once discontinued, the formation of a Bunion may be altogether prevented.

Nævus — Port-wine-Stain — Mother's Mark; and Nævus Pilaris—Mole.

Definitions.—Nævus is a hypertrophied state of the blood-vessels of the skin, forming slight flat elevations of a bright-red (arterial) or purplish (venous) color, occupying an extent of surface varying from the size of a pin's head to many inches.

Nævus pilaris is a Nævus covered by hair of variable length, and, like ordinary Nævus, is liable to occur in any part of the body.

Nævi are usually congenital; they are popularly called "Mother's marks" from a supposition that they are produced on the child before birth through some fear or fancy of the mother; and are variously named, according to their apparent resemblances, — "cherry," "strawberry," or "mulberry stain," etc.; and if the Nævus be hairy, it is called a "mouse-mark," etc.

In many cases no inconvenience results except the deformity;

but occasionally, more especially when the growth is at all prominent, there is a great disposition to unhealthy ulceration. When bleeding occurs, it is usually in a trickling stream, and without any degree of force (*Erichsen*). Nævi often die away without interference.

Treatment.—When treatment is desirable, the internal and external use of Thuya, as recommended for Warts, is sometimes successful, especially for vascular Nævus. Hempel states that Nævi may be removed by the external use of Kreas., one drop of the tincture to eighty of water, applied two or three times a day, the effects being excoriation, ulceration, and cicatrization, with scarcely any disfigurement remaining; Croton oil is reported to be equally efficacious. Carbo Veg. for pigmentary Nævus.

The surgical treatment recommended by Mr. Skey is the Seton thread. When the Nævus is large, threads should be passed across the growth in various directions, and not necessarily through its center, but occupying its substance in all directions. A large Nævus may require six, eight, or ten threads. Suppuration is the object aimed at, and when detected by the oozing of pus, the thread or threads should be removed; and when the Nævus is conveniently placed for the purpose, a little pressure should be applied.

Sebaceous Tumor—Wen.

Definition.—A Tumor composed of suety or fatty matter (Steatoma), and enclosed in a sac beneath the skin, occurring from obstruction of the secretory ducts.

These Tumors occur on various parts of the surface of the body, are smooth, non-elastic, pendulous, and movable; they slowly increase without pain, often to a very great size; attain their greatest development in warm climates—especially in the Hindu and negro races—where they have been met with of an enormous weight and size.

Treatment.—If Wens are likely to be amenable to medicines, Bary.-Carb., Sil., K.-Hydriod., Calc.-C., and Sulph., are, we believe, the most appropriate. In our own practice we have found excision generally needful, and have thus removed many without their ever returning. But Dr. Belcher has recorded a

case in which a crop of Wens on the head, of very old standing, rapidly disappeared under a short course of K.-Hydriod. (lx dil.).

Warts.

Definition.—A small, hard tumor, consisting of elongated and enlarged papillæ of the cutis vera, clothed with a stratum of hypertrophied and hardened cuticle, chiefly affecting the hands and face of young persons, appearing and disappearing without any particular known cause.

Treatment.—*Thuya.*—The Warts should be painted twice daily with the matrix tincture; at the same time a dilution (3x) of Thuya may be administered morning and night. The latter is especially necessary when the Warts appear in crops. This course may be followed for a week or two, and if improvement ensue, as it generally does, the treatment should be continued longer. When Thuya does not succeed, Rhus may be substituted, and used in the same way. [Moles may be removed by the acid nitrate of mercury, locally.]

Sulphur, once a day for a week or two, is an excellent remedy for numerous and obstinate Warts upon the hands. It is also useful after other medicines, to eradicate the tendency to recurrence. Dulc. 3, Ant.-C. 1, and Ac.-Nit. are also said to be often successful.

Parasitic Diseases of the Skin.

There are several members of the Ectozoa, as we have stated in the Section on Worms, the most common of which, except Scabies, are the following:—

Tinea tonsurans (*Tinea capitis*), the common scurvy Ringworm of the scalp, is generally seen only in children, is contagious, but not necessarily associated with impaired health, though it is common in lymphatic persons. It consists of circular patches varying from half an inch to several inches in diameter, the hairs of which look dry, withered, and as if nibbled off at a short distance from the scalp. The parasite is the Achorion Lebertii, (*Tricophyton*) and is visible in a good light, appearing like powdered sulphur when chloroform has been applied.

Tinea decalvans (*Alopecia areata* or *Porrigo decalvans*) consists of smooth, circular patches of perfect baldness, quite pale, of variable size—half an inch to two inches or more in diameter, and of which there may be several; the disease is sometimes seen in young persons, chiefly in girls, but is most common in adults. The parasite is the *Microsporon Audouini.*

Tinea favosa (*Favus* or *Porrigo favosa*) is the crusted or honeycomb Ringworm. It commences when the patient is about seven years of age, and is characterized by the presence of small straw or sulphur colored cupped crusts, which coalesce and give rise to a honeycomb appearance, or remain separate. It is contagious. Its parasite is the *Achorion Schonleinii.*

Tinea versicolor (*Pityriasis versicolor* or *Chloasma*) commences as small erythematous points, with itching, which is increased by warmth; slightly elevated, dry, rough patches of a fawn-color arise, somewhat scaly at the edge, and from which branny scales can be rubbed off; they occur on the chest, abdomen, and arms, vary in size from that of a twenty-five cent piece to that of the palm of the hand, and are much irritated by flannel. It is sometimes called variegated Dandruff or Liver-spots. The parasite is the *Microsporon furfur.*

Phthiriasis is the condition of the body favorable to the existence of pediculi.

Irritation of the skin caused by various parasites, etc., is also classed as a parasitic disease. Thus there is the irritation caused by the *Pediculus capitis* (head-louse), often associated with Eczema and other skin diseases; by the *P. palpebrarum* (louse of the eye-lids); by *P. vestimenti* (body-louse); by *Phthirius inguinalis* (crab-louse); by *Pulex penetrans* (Chigoe), an insect of the West Indies, which chiefly attacks the toes or spaces between them, is black, causes extreme itching, and even Ulcers; by *Pulex irritans* (the common flea); by *Cimex* (the bug); by *Leptothrix autumnalis* (harvest-bug), which is common in grass in autumn, and, getting on to the body of man, though exceedingly small, produces extreme irritation of the skin, etc.

Under this head also comes irritation from the stings of Wasps, Bees, etc., the treatment of which may be found in another Section.

Treatment.—There is no great difficulty in the treatment of the Ectozoic or Epizoic class of parasitic diseases, except when associated with true skin disease. Even then, correct treatment is often successful.

Strict cleanliness, the free use of soap and water, is a *sine qua non*, and in some cases may be alone sufficient; but if seconded by the application of Sulphurous or dilute Carbolic Acid, either as a lotion or by spray, a cure will certainly be effected.

Sepia is the best remedy for Ringworm of the scalp, and if administered early will often prevent the increase of the disease. Calc.-Carb. and Sulph. should also be remembered as useful remedies, combined with hygienic measures, in procuring and retaining a healthy condition of the skin.

For the removal of head-lice and their nits nothing is more effective than a free use of ointment of white precipitate of Mercury, followed by free washing.

Preventive Means.—Perfect habitual cleanliness, and proper attention to health.

Scabies—Itch.

Definition.—A contagious disease, characterized by a vesicular eruption, presenting numerous watery conical pimples, with violent itching, aggravated at night, and by scratching, depending essentially on the burrowing in the skin of a minute parasite—*Sarcoptes hominis* or *Acarus scabiei*, or Itch-insect.

It spreads quickly among the dirty, but has become much less frequent amongst the poor since they have enjoyed better diet. Warmth enlivens the mites, and they spread to other patients sleeping under the same bedclothes.

The violence of the symptoms depends on the number of the parasites present, the length of time the patient has been affected, and the degree of sensibility of the skin. The disease may occur on any part of the body, but generally affects delicate parts, such as the thin skin in the flexures of the joints, especially the wrists and between the fingers, the mamma, and the penis. In children, the buttocks, the inner line of the sole of the foot, the ankle, and the palm of the hand are most infected.

Treatment.—In our own practice we have found the free

application of Sulphur-ointment rapidly effective in destroying the insect and its ova. After thoroughly rubbing the whole body with soft-soap and warm water, then washing in a hot bath, or with hot water, and wiping thoroughly dry, the superficial and effete cuticle is removed, and the burrows and parasites freely exposed; the ointment should then be well rubbed in and allowed to remain on the body all night. On the following morning a tepid bath, using yellow soap, to wash off the ointment left on overnight, completes the cure. If the application of the ointment and the ablutions be not thorough, the processes should be repeated once or twice. Sulphur-ointment must not be continued too long, or it will produce an irritable state of the skin, which may be mistaken for a persistence of the disease. The administration of Sulphur, during the use of the ointment, and for two or three days subsequently, is recommended. Greasy substances alone are natural cures of Itch. All contaminated linen should be put into boiling water; other garments should be well ironed with a hot iron, or exposed to hot air at a temperature not less than 150 deg. or 180 deg. Fahr., or well fumigated with the vapor of Sulphur, to destroy any insects or ova concealed in the texture of the linen. The cure is often retarded, and the disease conveyed to others, by neglecting to carry out these suggestions as to clothing.

Irritation Caused by Stinging Insects and Plants.

The most common insect-stings and bites are those of the Wasp, Bee, Hornet, Gnat and Musquito. These, though painful, are not serious, except when a tender part, or sensitive or important organ of the body is attacked; or when the multiplicity of the wounds is so great as to produce general or venomous symptoms. Thus a man has been stung to death in a short time by a swarm of bees; when the eye is stung the consequences are liable to be serious; and a sting in the pharynx, as from swallowing a piece of honeycomb with a bee concealed therein, may be very dangerous. Musquito stings are peculiarly irritating, and when numerous, poison the blood, producing nervous depression and great febrile irritation. Some insects, as Scorpions, or the Tarantula in Italy and South America, give rise to more serious and even fatal disturbance or stupor by their bite.

In hot countries, various other insects, besides the musquito, attack man, and are sources of irritation and annoyance; "for every animal, insect, or reptile, in the warmer lands, is distinguished for its ferocity and pugnaciousness." The ant, especially the black ant, and the cockroach, are common and troublesome—the latter especially on board ship. It attacks the toes of persons asleep, and this so insidiously that the sleeper is not awakened until the quick is reached and the blood flows. The eyebrows, as well as the toe-nails, are also liable to suffer, unless protected.

Nettle-stings, and those of other plants, do not cause much disturbance besides the local irritation.

Treatment.—Ledum Palustre is the most useful remedy for common stings and bites. It should be applied locally, in a diluted form—twenty drops of the tincture to half a wine-glass of water. Should Led. not be at hand, Rhus or lime-water may be substituted. If neither of these remedies be available, *Allium Cepa* (the common onion) should be promptly applied; a piece cut off and at once placed on the wound. Indeed, Dr. Hill uses no other remedy than this for stings, etc.; if the pieces of onion are changed every few minutes, the pain, he says, diminishes immediately. Camph. also is useful. If there be much swelling, Apis should be given. Acon. will speedily remove febrile symptoms. For Venomous and Poisoned Wounds, see the next Section.

Accessory Measures.—If a wasp or other stinging-insect be the cause of the trouble, examination must be made for the sting, as this is often left in the wound; if present, it must be carefully extracted by the fingers or by a pair of fine-pointed forceps. If this cannot be done, and the sting has entered the skin perpendicularly, the pressure of a small key may be tried; the center of the hole should be placed over the wound enclosing it, and sufficient pressure should be used, when, probably, the sting will be squeezed out. The wound should then be well sucked to extract the venom, as directed in the next Section. After this, the lotion should be applied; or, if the pain be very great, hot fomentations.

Musquitoes may be prevented from troubling in the night by taking the precaution of rubbing a little spirits of camphor on the hands before going to rest. This is said to be a certain

remedy. Honey is also good, but from its sticky nature is more disagreeable than the camphor. Dilute Ac.-Carbol. is, however, the most sure protection from insect irritation. The hands, face, and other exposed parts should be washed with a weak solution once or twice daily. The Cockroaches of hot climates may be got rid of, it is said, by burning the bodies of two or three, and letting them lie about; the smell drives the rest away.

Poisoned Wounds.

Definition.—"Wounds inoculated with foreign matter, producing general symptoms, or propagating inflammation to other parts of the body."

Varieties.—Poisoned wounds may be made by venomous animals—Snakes, Scorpions, etc.; by animals having infectious disease; by dead animal matter; by morbid secretions; by vegetable substances; poisoned arrows; subcutaneous injection, etc.; or by mineral substances.

Serpents are venomous in a variable degree, according to their nature, size, or vigor; some cause immediate death by Convulsions; others produce Inflammation of the lungs; others induce death by slow poisoning, or by the unhealthy or diffuse Inflammation which they excite.

Deadly snakes are generally distinguishable by the thinness of the neck, immediately behind the head, and by their graceful forms and brilliant colors; also by their having two teeth in the upper jaw.

Treatment.—The immediate treatment of poisoned wounds is highly important, especially if they result from the bites of venomous reptiles.

(1) The first object to be attempted is arrest of the circulation of the poison. A handkerchief, rope, or anything else to serve the purpose, should be tied tightly round the limb, between the wound and the heart. While this is being done, if possible a second person should extract the poison as suggested in the next paragraph.

(2) The wound should be sucked with all the force the patient can command; or if unable to do it himself, an attendant should do it for him. No danger attaches to the person thus sucking

the wound so long as the poison does not come in contact with any abraded or otherwise imperfect surface of the mouth or other part of the body.

(3) Alcohol, in any of its forms—brandy, whisky, gin, etc.—according to Dr. Hill's testimony, should be drunk largely by the patient. He says: "Let him drink it freely, a gill or more at a time, once in fifteen or twenty minutes (or small doses oftener), until some symptoms of intoxication are experienced. * * It is remarkable how much alcohol a patient suffering from the poison of the Rattlesnake will bear. A little girl of ten years, who had been bitten by a Rattlesnake, took over three quarts of good strong whisky in less than a day, when but slight symptoms of intoxication were produced. She recovered from these symptoms in a few hours, and suffered no more from the poison of the serpent. Instances of cures with whisky are numerous, and I have never heard of a failure, when it was used as here directed. I presume it will do the same for the poison of other serpents." Alcohol so prescribed is given as a material antidote to a material poison.

(4) Carbolic Acid, applied locally, and administered internally, is recommended in cases of poisoned wounds.

(5) Arsenicum, in a low potency (1st or 2nd dec.), may be given if symptoms of rapid prostration occur. Thus administered, it tends to correct the poisoned condition of the blood, and acts strictly homœopathically.

Professor Halford, of Melbourne, speaks of the injection of Ammonia into the veins in cases of snake poisoning in the most eulogistic terms, and brings forward strong evidential warrant for his statement.

Excision of the wounded part may be required in some cases; but would probably be rendered unnecessary by the Carbolic Acid treatment just pointed out.

Other poisoned wounds should be treated, according to their nature, by appropriate antidotes. In the case of wounds from the introduction of mineral substances under the skin, those to which workmen—mechanics, founders, and others—are liable, the offending material has generally lodged in the body and produced disturbance in the part before its presence is suspected. Inflam-

mation is the result, and suppuration should be encouraged, as this is generally the only method of eliminating the poison. The treatment recommended for Abscess is appropriate to this condition, with, in some cases, the aid of Ars.

CHAPTER XII.

MISCELLANEOUS DISEASES.

Angular Deformity of the Spine—Kyphosis—Lordosis—Pott's Curvature.

Definition.—A deformity of the spinal column due to caries of the anterior bone and cartilage, and characterized by an angular projection, or hump, formed at the chief seat of disease.

The disease is a morbid ulcerative process, which gradually disintegrates and absorbs the bony tissues, then the cartilaginous tissues, meanwhile discharging pus from the ulcer. The anterior segments of the mid-dorsal region (sometimes as many as five or six) are the special seat of the disease, which ascends upward and downward, but rarely attacks the posterior segments. The curvature is therefore anterior. Posterior curvature usually affects the cervical and dorsal regions, and may be produced in infants by placing the hands under the armpits, and compressing the ribs, thereby pushing back the sternum and spine, in the act of lifting or jumping the child.

Causes.—Angular deformity is generally developed in children of strumous or other unsound constitution. Sometimes a fall, a blow, or other local injury is referred to as the immediate cause of the disease; but the true cause is to be found in systemic cachexia. The progress of the disease is not necessarily rapid, hence the deformity may not become prominent till adult life.

Treatment.—Attention should be given to the constitutional cachexia, and the following remedies be administered as may be most appropriate:—Calc.-Phos., Calc.-C., Ac.-Phos., Sil., Hep.-S., Sulph., Asaf., Mez., etc. (See also the Section on "Scrofula.")

One important feature of the treatment is to relieve the pressure on the diseased bones and cartilages; and to accomplish this, rest in the recumbent posture for a long period is absolutely required. Generous, nutritious diet must be given, and deleterious elements avoided. Bathing and friction should be daily practised. When sufficiently recovered, out-of-door exercise in fine weather, with suitable supporting apparatus, should be secured.

Lateral Curvature of the Spine.

Definition.—An inclination of the spine from the natural erect form to the right or left side; chiefly affecting females from about the age of ten to sixteen or upwards. A curvature is said to be right or left according as the convexity of the curve is toward one or other side. The spine assumes a double curvature —one being caused by an external agent, as muscular force, and is termed primary; the other is a compensatory curve in the opposite direction to restore the balance disturbed by the primary curvature, and is termed secondary.

Symptoms.—The spine is curved something like the letter S, and also twisted in its long axis; one of the scapulæ, or one side of the bosom, projects, and the right shoulder and right side of the chest are preternaturally high and rounded, while the opposite are depressed and concave. Correspondingly, the left hip projects, and the loin on the right side is curved inwards.

Causes.—Spinal curvatures are readily produced, especially in weakly patients, by occupations and pastimes that tax one side of the body more than the other; bad postures while sewing, ironing, writing, drawing, reading, playing the piano, riding, carrying a child on one arm, and in the exercise of many kinds of handiwork. Even bad postures in lying, sitting, and standing are liable to cause Lateral Curvature. All occupations which require the raising of one shoulder-blade and arm, standing at ease on one leg, crossing the legs, sitting on one side of the seat, leaning on one hip; want of unrestrained open-air exercise; tight dresses; stays and bodices with steel, whalebone, or wooden supports, may operate as causes of curvatures. One leg being shorter than the other, walking with an artificial leg, Hip-joint disease, Rickets,

paralytic affections of the lower extremities, Rheumatism, etc., may also cause distortion. The *modus operandi* by which one-sided postures cause Curvature may be easily explained. It is the compressibility of the intervertebral substance, which is so considerable that an adult person loses about half an inch of his height after having been in the erect posture all day, and does not regain it till after he has been lying at rest for several hours. Now as the united thickness of the intervertebral substance in an adult is about 3.875 inches, we see that they lose nearly one-eighth by the day's compression, and the normal resiliency is not recovered until after hours of rest. "But if the weight of the body falls unequally on the vertebræ day after day, it must be evident that they will become compressed on one side more than on the other; and that if their elasticity be impaired, and the muscles and ligaments be weak, and the bones soft, as they are in young persons who have not a sufficiency of fresh air, wholesome food, and active exercise, this lateral distortion will become permanent" (*Bishop*), especially in a growing, delicate patient.

Treatment.—This must be both constitutional and local, and be regulated by the nature, extent, and cause of the deformity. If treatment is neglected, curvatures, however slight, will certainly get worse, for the extreme flexibility of the spine in youth, while it offers a favorable condition for cure, equally tends to an aggravation of the deformity if treatment is neglected. Further, as rigidity of the column increases with years, so the prospect of improvement diminishes; at the same time, and for the same reason, Curvatures of long standing are less likely to grow worse.

1. **Remedies.**—Calc.-Phos., Calc.-C., Ac.-Phos., Sil., Sulph., etc. Externally, a weak Arnica Liniment may be used.

2. **Habits.**—As soon as Curvature is detected a change of life is desirable. Work or study should be relinquished or diminished and all measures for strengthening the constitution employed. Careful attention should be paid to attitude; much rest should be taken in the recumbent posture, so as to take the weight of the head and shoulders off the spine.

3. **Hygiene.**—Good diet, including in some cases Cod-liver oil; pure air, if possible sea or mountain air; bathing the whole body, and especially the back, with cold salt-water, followed by

vigorous friction; a mattress instead of a feather bed to sleep on; early hours for rising and retiring; warm, easy, and light clothing, especially avoiding stays, tight-fitting boots, garters, etc.

4. Gymnastics.—A suitable course of gymnastic exercises in the open air, or in a well-ventilated room, must be intelligently adopted, and graduated to the strength of the patient, contrived so as to bring the left arm and leg into play, and be made pleasant rather than irksome. This is an important part of the treatment. The exercises must be persisted in for a considerable time, as the desired changes can only be gradually brought about. The patient needs regular supervision to correct the various faulty postures which are enumerated above.

5. Appliances.—"Mechanical support," as it is termed, is scarcely ever necessary, and is often productive of the worst results. Machines are constructed something like stays, having a steel band passing round the hips and abdomen, steel rods, crutch-handles, etc. These require screwing up or adjusting once or twice a week by a specialist, are most unwholesome instruments, and according to our observations intensify the evils from which the patient suffers. To fix a portion of the body, which nature intended to be most mobile, immovably in one of these machines, not only interferes with the respiratory movements, but weakens and subsequently destroys muscular power, that power on which we rely for maintaining the erect posture when treatment is suspended. We have repeatedly advised the removal of these machines, and adopted rational measures and treatment, to the great relief of patients, and their subsequent early recovery. (See "Franklin on Spinal Curvature.")

Morbus Coxæ—Scrofulous Disease of the Hip-Joint.

This is a slow, insidious, and serious disease. The child is supposed to be suffering from "growing pains" for months before the disease assumes an active form.

Symptoms.—The first distinctive symptoms are—slight pain, chiefly referred to the knee, lameness, and weariness. There may be even slight swelling in the knee joint, so that remedies are often applied here, but the disease is in the hip. This may be proved by pressing either in front or back of the hip-joint, or by

jerking the thigh-bone against the joint, as by a sharp tap on the heel, when pain will be felt in the hip. As the disease progresses, the nates of the affected side waste and become flabby; the limb is shortened, either by caries of the neck of the femur, or by destruction of the ligaments of the joint and consequent dislocation of the joint upward on the *dorsum ilii*. There is increased fullness about the limb, the pains increase in severity, especially at night, and there are often startings of the limb during sleep; Abcesses form, and afterward burst on the nates or groin, or burrow deeply and discharge their contents into the rectum. Wasting of the natis of the affected side is one of the earliest symptoms of disease of the hip.

The duration of the disease varies from two or three months to several years. But it is much modified, both as to its duration and results, by skillful treatment.

White Swelling of the joints is a disease of similar character.

Treatment.—The medicines likely to prove beneficial are Acon., Bell., Coloc., Hep.-S., and Ars., in the early stage of the disease; for special symptoms, Calc.-C., Sil., and Phos. When Abscesses have formed, and suppuration is established, the treatment recommended in the next Section is appropriate.

Accessory Treatment.—Rest, with the limb in a straight posture, and absence of articular pressure, the latter being, probably, the more important element: surgical appliances are necessary to insure it. The diet should be nourishing, and include Cod-liver oil. Pure air, and especially a change to the sea-side, will expedite the cure. If Abcesses form, they should be kept free from fœtor by means of Carbolic acid.

Abscess.

Definition.—A collection of matter in any tissue or organ, deposited within a sac or cyst of organized lymph, and supplied with absorbent and secreting vessels.

(*a*) *Acute Abscess* commences with throbbing pain, bright redness, and swelling of the part; these symptoms are soon followed by suppuration, which is marked by an alteration in the color of the skin, and a change in the character of the pain, the former becoming livid, and the latter less acute, being rather felt as a

sensation of weight and tension. "After this, the parts between the Abscess and the surface become successively softened and disintegrated. The tumor becomes more and more prominent; the center exhibits a dusky-red or bluish tint, the cutis ulcerates, the cuticle bursts, and the pus escapes. But where pus is formed under dense fasciæ, or deep in the breast or pelvis, and cannot quickly make its way to the surface, the pain is not relieved, but much aggravated by the increase of distention; and the constitutional fever and chills are much more intense" (*Druitt*).

(*b*) *Chronic Abscess* first appears as an indistinct tumor, the fluctuation being more or less marked according to the distance from the surface. The inflammatory symptoms of the acute variety are altogether absent, unless the disease be far advanced or accidentally irritated.

Abscess and Diseased Bone.—Chronic Abscess is sometimes a consequence of Inflammation of bone. This may be suspected whenever persistent inflammatory enlargement and tenderness exist, especially if it can be traced to an injury, and there is a fixed pain at one particular spot, which is increased at night. The long persistence of such symptoms, in spite of remedies, although there may be occasional remissions, almost certainly indicates the existence of a circumscribed Abscess in the bone, which often requires surgical measures for its relief and cure.

Mammary Abscess—gathered breast—is specially treated of in Part IV.

Causes. — Abscesses, with few exceptions, are indicative of constitutional debility, and are a frequent sequel of low exhausting fevers. Sometimes they result from blows, or from foreign bodies introduced into the skin or flesh—splinters, thorns, etc.

Diseased bone, as stated above, may cause Abscess, or inflammatory enlargement of a part.

Epitome of Treatment. — 1. *Before Suppuration.* — Acon., Bell., or Merc. Lint saturated with a lotion of the same remedy as administered may be used locally.

2. *During Suppuration.*—Hep.-S., Sil., Ars., China.

3. *After Suppuration.*—Calc.-C., China, Ac.-Phos., Sulph., etc.

Leading Indications. — *Hepar Sulph.* — This remedy promotes the suppurative process in acute Abscesses, and is generally

sufficient when the discharge is healthy. The local measures pointed out further on should be adopted.

Silicea. — Tardy, long-continued, or unhealthy discharge; chronic Abscesses and Abscess of bone. It facilitates suppuration, or moderates it when excessive.

Mercurius.—Painful Abscess, with copious discharge of thick matter; chilliness, with thirst, and nocturnal aggravation of the pains.

Belladonna.—Severe pains, headache, and much constitutional disturbance.

Arsenicum.—Severe burning pain, with symptoms of general vital depression; Abscess having a gangrenous appearance, or discharging pus tinged with blood.

China. — Abscesses following prolonged disease; prostration from excessive discharge of matter or blood, Diarrhœa, etc. It greatly sustains the constitution during suppuration.

Calcarea.—This remedy assists the healing of the Abscess after suppuration is completed, and the elimination of disease from the constitution.

Aconitum.—Well-marked, feverish symptoms, during any stage of the disease.

Local Treatment.—Abscesses arising from local injury should be freed from all sources of irritation, such as thorns, splinters, etc. Poultices are valuable; they relax tension, and, consequently, relieve pain; if applied directly an Abscess begins to develop, a poultice will either disperse or restrict the formation of pus. If suppuration has proceeded too far to be arrested, poultices facilitate the progress of the pus to the surface and its ultimate expulsion. Fomentations with hot water, frequently repeated, are valuable adjuncts to poultices. Generally, when pain has subsided, a water-dressing should be substituted.

Opening of Abscesses.—Acute Abscesses seldom require the lancet, especially when they point and become pyramidal without enlarging in circumference. The formation of an Abscess under strong fasciæ or ligamentous textures, which ulcerate with difficulty, require an artificial opening to prevent burrowing of the pus, and the setting up of great constitutional disturbance. When an Abscess occurs on an exposed part, and it is desirable

to avoid the scar which generally ensues when it bursts spontaneously, or when it is so situated that it may discharge into some internal cavity—the chest or windpipe—an opening should be made by a surgeon. When an artificial opening is required, the operator should be certain that the knife enters the cavity of the Abscess to let the pus out freely, and that the opening be made at the most dependent part. For those who dread pain even in the trifling operation here referred to, the use of local anæsthetic agents is recommended.

After an Abscess has been opened, and its contents discharged, the Calendula lotion (one teaspoonful of the tincture to three tablespoonfuls of water) greatly expedites recovery. It may be applied by saturating a piece of lint, or two or three thicknesses of linen, with the lotion, and covering it with oil-silk. The dressing should be renewed two or three times a day.

Diet and Hygiene.—As Abscesses are generally indications of debility, a liberal allowance of nourishing food is of great importance; it should include good animal broths, broiled mutton chops, chocolate or cocoa, and, in some cases, good beer or wine. Change of air, with residence by the seaside or in the country, forms an important part of the hygienic treatment.

Ganglion.

Definition. — A Ganglion is a small swelling, composed of toughish cysts, formed on one or more of the tendons of the back of the wrists, rarely larger than a child's marble, generally smaller, attended with weakness, but free from pain.

Causes.—Excessive action of the tendon, or of the extensor muscle leading to the tendon to which the Ganglion is attached. Mr. Skey states that he has treated many cases in the persons of violin-players, in whom the malady has been confined to the left hand, the right, or bow hand, being free; he states also that Ganglions are often seen in pianists who practice many hours daily. But they are not confined exclusively to this class of persons.

Treatment.—(1) The method we have formerly seen adopted was by one or more violent blows from a thick book to rupture the sac, and cause its contents to escape into the surrounding tissues. This rough measure was by no means uniformly, or even

generally, successful. (2) Mr. Skey recommends the hand to be bent so as to tighten the skin over the cyst, and to pass into the center of the tumor a lancet, and by a lateral movement of the instrument, to evacuate the contents; then, by kneading the part well, every drop should be removed. Afterwards, a thick compress of lint should be firmly strapped with plaster, and a roller applied. (3) The method, however, we recommend to be first adopted, suggested to us by Dr. Clinton, is the internal and external use of Benzoic Acid; 2 drops of the 2x dil. thrice daily. For external use, Benzoic Acid, 3 grains; Glycerine Cerate, one ounce; to be well rubbed into the part morning and night. Phyto. and Mez. are also efficient.

Obesity—Corpulence.

Definition.—The excessive accumulation of fat under the skin and around the organs of the body, so as to exercise a prejudicial influence on the health, usefulness, or comfort of the patient. It is not a favorable condition for resisting disease.

Obesity may be said to exist only when fat is present in such large quantities as to disqualify the person for performing the various duties of life, by occasioning difficulty of breathing, panting on slight exertion, deranging the circulation, and causing various functional disturbances, with diminution of mental and bodily activity. The term Corpulence is restricted to cases in which the quantity of fat is not so great as to amount to positive inconvenience or discomfort.

Causes.—Hereditary tendency or constitutional predisposition can alone account for the excessive accumulation of fat in many instances. Some persons are natually fat, others lean; some become corpulent on a moderate diet, others spare in the lap of luxury. These are matters of common observation, but of which we can offer no explanation. Age exercises considerable influence; children are usually fatter than adults; after the middle period of life, fat often accumulates in considerable quantities. In old age, however, the adipose tissue, and the fat it contains, generally diminish. Race, again, is an important element in the question. The Americans are remarkable for their leaness, and the Arab is almost destitute of fat; Europeans, and especially the

English and the Dutch, on the other hand, are proverbially fat; hence, John Bull is always pictured excessively corpulent.

Besides individual or accidental causes of corpulency, the following circumstances directly influence the production of fat. Food, rich in hydrocarbonaceous matter; for although a certain amount of such food is necessary to maintain the temperature of the body, if it be taken in excess, such excess is often stored up as fat. Ease of mind and repose of body are conditions highly favorable to the formation and accumulation of fat; whereas anxiety, fretfulness, night-watching, etc., have a directly opposite effect. This science proves the truth of the adage—"A contented mind is a continual feast." A comfortable temperature is an important element in the production of corpulence; for although a high temperature does not directly engender fat, it is a condition favorable to the formation of fat, and one in which less is consumed.

Treatment.—The treatment of Corpulence brought prominently before the public by the late Mr. Banting, in the simple story of his remarkable experience, proves that a proper diet alone is sufficient to remove the condition, with its long train of evils, without the addition of nauseous drugs, or of those active exercises which it is in vain to instruct unwieldy patients to take.

The chief feature in the Banting dietary is the exclusion of two elements—starch and sugar—from the ordinary food of a well-to-do gentleman:—Bread (except toasted, or the crust cut off a common loaf), potatoes, sweet roots, butter, sugar, cream, beer, port, and champagne.

These articles of food and drink contain starch or saccharine matter, and are the chief fat-producing elements in our dietary, and to relinquish them is often the only means necessary to escape the thraldom of corpulence. In one year, on this diet, Mr. Banting reduced his weight forty-six pounds, and his bulk about twelve inches; at the same time his numerous corporeal infirmities were greatly mitigated or altogether removed.

A Banting diet cannot, however, be recommended indiscriminately. Persons who may deem it necessary to make great changes in their diet should consult a physician.

"As a resume for the guidance of the corpulent, it may be said

that the fat of meat; butter, cream, sugar, and sweets; pastry, puddings; farinaceous articles, as rice, sago, tapioca, etc.; potatoes, carrots, parsnips, beet-root; sweet ales, porter, stout; port wine, and all sweet wines, should be avoided, or only taken to the most sparing extent. The articles allowable, and they should be taken to the extent of satisfying a natural appetite, are lean meat, poultry, game, eggs, milk moderately, green vegetables, turnips, succulent fruits, light wines (as claret, Burgundy, hock, etc.), dry sherry, bitter ale in moderation, and spirits. Wheaten bread should be consumed sparingly, and brown bread is to some extent better than white. The gluten biscuits prepared for the diabetic may, on account of their comparative freedom from starch, be advantageously used as a substitute for bread in the treatment of Obesity." (Pavy "On Food.")

Old Age and Senile Decay.

Human life may be divided into three great epochs—the period of development, that of middle life, and that of physical decay.

Under the first division is included the whole time from birth up to about the twenty-fifth year, during which the vegetative organs and those of the lower animal life are consolidating. The central nervous system is more slow in reaching its highest development, and the brain especially is many years later in acquiring its maximum of organic consistency and functional power.

The middle period of life—between about the twenty-fifth and the forty-fifth year—is the time that the individual is subjected to the greatest pressure from external causes. The industrial classes are absorbed in the struggle for maintaining themselves and their families; the rich and idle are immersed in dissipation, or haunted by the mental disgust it excites. At the same time, the women are going through the exhausting process of child-bearing, and are either surrounded with the cares and duties of a poor household, or equally pressed with anxiety to attain positions for themselves and their children in fashionable life; or they are idle and heart-weary; or forced to an unnatural celibacy. Frequently they are both idle and anxious.

The period of decline may be said to commence when the first

indications of distinct physical decay manifest themselves, and when a new set of vital conditions come into force. But there are no sharp lines of demarcation between the epochs thus indicated, the one insensibly growing into the following.

Youth and Age.—Although the activity of the growth of the organs in childhood and youth offers a striking contrast with their decline in old age, there is, notwithstanding, a resemblance in the diseases of the two extremes of life, like the tints of the rising and setting sun. Infantile Convulsions, and senile Convulsions; infantile Diarrhœa, and senile Diarrhœa; infantile Eczema, and senile Eczema; uric acid deposits in childhood, and uric acid deposits in age, may be adduced as illustrations of the resemblance of the diseases affecting the two extremes of life. In the early period, the constitution has not acquired its vigor; in the closing, it is losing it.

To the mere worldling, old age is repulsive. But when life has been spent wisely—errors corrected, the heart disciplined, and the intellectual and moral powers are in the ascendant—old age—moderated, chastened, elevated—presents a spectacle happily described as a "crown of glory." A human being who, after fulfilling all the duties of life, is still living in a "green old age;" whose "eye is not dim, nor his natural force abated," thus ripened for the future, may well command our admiration and veneration.

A brief reference to the changes and dissolutions of man's material frame will form an appropriate conclusion to this portion of our work.

The decay of nature is gradual, and does not affect all the structures of the body equally at the same period; it also begins in some at a comparatively early, and in others not until a considerably advanced period of life. The following are illustrations of the changes attendant upon old age, and they exercise an important influence in accelerating that final one which is the common lot of humanity.

I. The Bones.—These undergo very characteristic changes. In infancy and childhood the animal element predominates; hence we can explain why the bones are so pliant and fractures so rare. In adult life, the relative proportions of bone may be approximately stated as consisting of one-third of animal and

two-thirds of earthy matter. In advanced age, the earthy matter is in excess. This alteration in their composition renders the bones extremely brittle and liable to fracture. Fractures, too, are then more oblique and comminuted, and more inapt to unite firmly, than those occurring at an earlier age.

II. The Muscles.—The minute cells, aggregated in the form of fibres, of which the muscles of the body are composed, are rapidly destroyed by the contraction of the muscles; but in vigorous life, by the digestion and assimilation of food, they are as rapidly reproduced. In old age, on the contrary, the disintegrated cell-tissue is but tardily repaired, and the muscles become soft, flabby, and pale from an insufficient supply of blood; they are consequently unequal to severe or protracted exertion; and, there being no reserve, muscular debility is easily excited, and the strength but slowly and imperfectly restored. The tendinous portions of the muscles are also liable to earthy deposits in them; thus their resisting forces become weakened, and they are in constant danger of rupture if subjected to any undue tax.

III. The Heart.—Another most important and frequent change is one that takes place in the textures of the central organ of circulation. The heart becomes weakened from senile softening, and degeneration of its muscular structures into fatty tissues; its pulsations are thus rendered less and less efficient to propel the blood to the extremities. The blood failing to complete its circuit, the hands and feet become cold, the decline of temperature gradually extending to the central organs of the body. This reduced power of the heart, with the disposition to atheromatous deposits in the coats of the blood-vessels, referred to in the next paragraph, with subsequent ossification of the valves of the heart, is one of the most common and fatal changes attendant upon old age. These changes as they proceed are generally hidden and painless.

IV. The Blood-Vessels.—In the silent progress of years the arterial system is liable to undergo changes which are incompatible with the performance of its important functions. The arteries gradually become converted into ossific or bony patches, of greater or less extent, often so considerable as to lead to changes of a vital character by destroying the elasticity of the

arterial tubes, and deranging the circulation of the blood in the parts to which they conduct. Thus the nutrition of the body is impaired, and the functions of the nervous and muscular systems are only imperfectly performed. Further, the ossific patches in the coats of the arteries may lead to their rupture, or become causes of Aneurism, Gangrene, Apoplexy, etc., forms of disease to which the aged are especially liable. Apoplexy, from this cause, is one of the most frequent causes of death in old age. The cerebral arteries become diseased, and as the blood is driven into them they give way. Thin persons, in common with stout, whose blood-vessels and heart are diseased, die from Apoplexy.

An observation on the two last paragraphs may not be here inappropriate. Ossification of the coats of the arteries, and fatty degeneration of the heart, usually occur at the same time of life, and the one condition, happily, counteracts the consequences of the other. The life of an aged person would be in far greater jeopardy, if, while the walls of his arteries were degenerating, his heart retained all its original force. As it is, however, the loss of resisting power of the coats of the arteries finds its counterpart in the fatty metamorphosis of the muscular tissues of the heart.

V. The Vertebræ.—The changes in the spinal column are very considerable; they alter the external form of the body, and more or less derange the functions of the chief organs. The three graceful curves in the spine, so exquisitely arranged, both to give space and protection to the internal viscera, and for the transmission of the weight of the head and trunk in the line of gravity, become more or less obliterated in advanced life, and the center of gravity disturbed. The vertebral column also loses its elasticity; the disc of cartilage placed between the successive vertebræ, to break the force of shocks and prevent jarring of the brain, partly disappears or ossifies; the mobility of the spine is diminished, and its muscular supports enfeebled, and thus a false step or a trifling accident may be converted into an occurrence of grave importance. The alteration in the curves of the spine produced by the above causes gives that change to the external form which is so characteristic of old age. Corresponding with these changes in the spine, as affecting the external form, are others which affect the bones generally. Owing to the diminished size of the muscles,

and the absorption of fat from beneath the skin, points of bone in various parts become more angular and prominent, and the limbs lose that graceful and rotund form which was the pride of earlier years.

VI. The Eyes, etc.—The special senses, as those of sight and hearing, frequently, and sometimes at a comparatively early period, give evidence of approaching decay. The *Arcus Senilus*, a circumferential opacity of the cornea, resulting, it is thought, from fatty degeneration, and generally associated with a like degeneration of the heart, is, as its name implies, an affection incident to the aged. Cataract—opacity of the crystalline lens, or its capsule, or both—seems to be the consequence of impaired nutrition, and is met with in elderly persons only, except as the result of inflammation or injury. But the most frequent cause of impaired or perverted vision is alteration in the form of the lenticular bodies of the eye—the cornea and the lens—which, losing their natural convexity, interfere with the correct impression on the retina at the proper fixed point of the object of vision.

Defective hearing is another not infrequent attendant upon old age, and may result from various causes, the most frequent being impairment of the acoustic nerve.

VII. Mental Faculties.—Associated with these important physical changes, the mental faculties partake of the general deterioration. That the mind retains its vigor and clearness of perception, while the body undergoes decay, is a poetic fiction; the brain shares inevitably in the physical disorganizations we have noted. This is proved by the effects of disease. During recovery from wasting diseases, especially from those in which the phosphates have been carried off without a corresponding reproduction, the exercise of the brain is not only difficult but dangerous, and it has not infrequently happened that death has resulted from complete breakdown of the nervous system through too early mental work during convalescence.

Gradual Decay. — The various forms of man's decay are gradual and progressive. Death may take place suddenly from Heart-disease, Apoplexy, rupture of an Aneurism, etc.; but it is only the termination, not the disease, that is sudden. For years

before the fatal issue, the organ was undergoing degeneration of structure. Death under such circumstances has been compared to the fall of towering cliffs, which crush everything beneath. The catastrophe is terrible, and occurs unexpectedly; but it was the slow disintegration of many preceding winters' frost that hurled it down the steep. Sudden death is a misnomer in language, except as it takes place from accident or poison.

By the use of the ophthalmoscope the character and extent of brain and nervous degeneration can often be detected. Several cases have been recorded in the medical journals from practice, in which Atrophy of the optic nerve was found to accompany disease of the central nervous system. The detection of the particular form of decay from which the life of an aged person may be jeopardized is valuable, not merely for the sake of diagnosis, but because it often affords a clue to the direction treatment should take.

Winter and Senility.—The climatic conditions of winter are highly favorable for the development of all kinds of weaknesses and tendencies to organic disease, especially of the brain, heart, blood-vessels, kidneys, and liver. Facts on a large scale prove that defects in these organs manifest themselves most frequently and severely in cold weather. The whole constitution is lowered by the conditions of winter, and, to an extent, devitalized; and medicine can only exercise an indirect power over these conditions, except to prescribe such remedial or preventive measures as we have suggested in this Section,—artificial heat, clothing, food, etc., to forestall, if possible, the effects of cold, and to counteract any of the organic leakages we have enumerated.

Premature Old Age.—In alluding to the decay of nature, we may add that we refer rather to the vital decay of individuals than to the mere lapse of years; vital conditions cannot always "be measured by number of years." It is well known that some persons at fifty, or even earlier, are in this respect older and more shattered in constitution than others who have attained to the age of seventy or upwards.

Our present manner of life, business haste, or anxieties, tend to induce premature decay. Probably as the result of improved sanitary measures, a more correct and general recognition of the

laws of health, and of the rapid spread of Homœopathy, the attainment of a vigorous old age without the premature feebleness and decay hitherto so generally observed, will be more common.

Modes of Dying.—Some particulars of the different modes of dying will here be appropriate. Diseases terminate fatally in one of two ways: either by suspending the heart's action, called Syncope, or by interrupting the function of breathing, called Asphyxia, or suffocation.

I. Death from Syncope may arise from an insufficient supply of blood to the heart, as from a sudden copious hemorrhage, or from slowly acting causes, as deficient food, or defective assimilation. This is Anæmia, and its symptoms are dimness of vision, dilated pupils, vertigo, restlessness, a slow and feeble pulse, pallor of the face and lips, coldness of the extremities, cold sweats, irregular gasping respiration, and, finally, insensibility, with or without convulsions. If the heart is examined after death, it is found nearly or quite empty, and contracted.

Death from Syncope may also arise from failure of the contracting power of the heart, as occurs in Pericarditis, Peritonitis, and in some forms of poisoning. This is Asthenia, and the symptoms are—quick, feeble, or imperceptible pulse, cold extremities, and clammy sweat of the general surface, the intellect usually remaining clear to the last. After death the right cavities of the heart may be found full of dark blood, while the left are distended with red blood.

II. Death from Asphyxia may result in three different ways. First, by obstruction to the entrance of air into the lungs, as in drowning, strangulation, œdema of the glottis, Croup, etc. The change of venous blood into arterial in the pulmonary capillaries is stopped, while the unchanged blood circulating in the arteries paralyzes the nervous system. This is Apnœa. The symptoms are,—quickened, labored breathing, violent action of the auxiliary muscles of respiration, protruded eyeballs, swollen and livid countenance, distention of the veins of the neck, and soon loss of consciousness, often with muscular twitchings or convulsions. The heart and arteries continue to beat after breathing has ceased, and if the lungs are examined after death, the right cavities are found distended with dark blood, but the left empty.

Secondly, the nervous system may be primarily at fault from structural disease in the brain, or of the circulation through that organ of poisoned blood, as happens in Uræmia and various specific fevers; a state of stupor, or insensibility to external impressions, is induced, the *medulla oblongata*, and through it the nerves of respiration, are paralyzed, the respiratory movements become embarrassed, and, finally, entirely cease. This is Coma. As in Apnœa, the blood is not aerated, and similar consequences ensue. But there is this difference: the mechanical movements of respiration suffer before its chemical functions, and the brain is primarily affected, and the lungs secondarily. In Coma, loss of consciousness precedes difficulty of breathing, and the respirations become slow, irregular, and stertorous from diminished sensibility. Thirdly, this mode of dying may be occasioned by blocking the pulmonary artery, and, in consequence, stoppage of the supply of blood to the lungs. A fibrinous clot is carried into the pulmonary artery, and suddenly and completely arrests circulation in the lungs, or if the obstruction is incomplete, the patient may survive for several hours. This is Embolism. The symptoms are extreme dyspnœa, coming on suddenly, with pallor and faintness.

But under whatever circumstances death may take place, it is in keeping with those ceaseless changes which characterize the general world of matter; the body no longer being of service in its material capacity, is transformed to reappear in other conditions, or in other combinations. The earth itself upon which we tread, and from which we derive our food, the solid rocks from which we rear our habitations, are ever-varying theatres composed of the fragments of pre-existing organic beings, out of which are constantly springing forth new forms of utility and beauty. As the body is resolved into its original dust, and the simple elements of which it is composed pass into other combinations and other forms, we believe man himself becomes disengaged from the physical, and passes up from a lower to a higher form of life. This disentanglement takes place slowly, as the body wears out by age, or at any time of life, as the result of disease or violence.

Treatment of the Aged.—There are many ailments peculiar

to the approach of old age which require special medical treatment, or the application of particular measures, in which we are often rewarded for the timely use of appropriate remedies, and the prompt employment of judicious means, by seeing the flickering flame rekindled, and valuable life considerably prolonged. On two or three points only can we make some general observations.

1. Food.—Food should be of a much less solid form than during the vigor of adult life. Just as nature provides fluid food during infancy before the teeth appear, so the loss of teeth, a common attendant upon old age, necessitates a return to a form of food that does not require mastication. Inattention to this point is, we believe, one of the most fruitful causes of the impaired digestion, weakness, and sufferings of the aged.

Frequently, artificial teeth cannot be tolerated, and the only path of safety lies in the adoption of an almost exclusively fluid diet. We have had many cases under care in which our advice on this point has been carried out with the most beneficial results.

2. Rest.—This is essential to the health and safety of the fragile frame of the aged. The sports and exercises of youth, or the exertions of maturer age, would fracture the bones, rupture the tendinous portions of the muscles, or occasion a blood-vessel to give way. To the aged long-continued exercise and too little rest are highly unfavorable, the reparative processes being only slowly performed. Happily, the activities and athletic exercises of youth become distasteful to old persons, and the burdens of mid-day life are transferred to the succeeding generation, and they now seek and enjoy a condition of quiet and repose necessary to their present well-being.

3. Warmth.—In the winter season, when sudden changes of temperature are frequent, provision should be made for preventing the ingress of the cold early-morning air, and for maintaining a suitable temperature in the bedroom through the whole night. The temperature of the sleeping apartment should be kept at 60 deg. to 62 deg., and measured by a thermometer, as the sensations of persons are not a sufficient guide. It no doubt often happens that the lonely encounter with death takes place in

the stillness of the hour before sunrise, from a sudden access of cold air which the extreme feebleness of old age could not resist or endure. As before stated, cold seriously affects the aged, and it is a fact which excites frequent observation that, soon after the setting-in of severely cold weather, the obituaries in the public papers of persons in advanced life become unusually numerous. The winter of 1871-2 shows how temperature influences the mortality of the aged. The severity of the frosts of the early portion of the winter proved fatal to many aged persons, who, resembling the autumnal leaves, are easily shed; but the survivors enjoyed the exceptionally mild winter that followed, and many thousands of them are now alive who must have succumbed had the weather throughout continued severe. As a consequence of the mildness of the weather, the mortality of the first quarter of the year 1872 was considerably under the average. "An aged man, with a sluggish heart, goes to bed with a temperature, say, of 50 deg. to 55 deg.; in his sleep, were it quite uninfluenced from without, his heart and his breathing would naturally decline. Gradually, as the night advances, the low wave of heat steals over the sleeper, and the air he was breathing at 55 deg. falls and falls to 40 deg., or it may be 35 deg. or 30 deg. What may naturally follow less than a deeper sleep? Is it not natural that the sleep so profound shall stop the laboring heart? Certainly. The great narcotic never travels without fastening on some victims in this wise, removing them, imperceptibly to themselves, into absolute rest—inertia—until life recommences out of death" (*Richardson*).

The fact that the coldest portion of the twenty-four hours is just before daybreak is one full of warning to the aged, as it is also to the feeble generally. How often has it been observed that the setting in of grave or immediately fatal symptoms has coincided with this daily recurrence of cold! This fact gives force to our recommendation of striving, by keeping bedroom fires brightly burning at this juncture, to neutralize as far as possible the consequence of this low-temperature wave.

A regulated temperature in his apartment, heat-producing kinds of food, warm clothing, and other kindred measures, should therefore be adopted in the treatment of the aged.

4. Medicines.—On this point we can offer no definite suggestions. The selection of remedies must be determined strictly according to the symptoms the patient may present, modified by any idiosyncracy of constitution.

Thus the physical frame decays and man passes away, death terminating the journey of life, and the traveller welcoming the long repose as he had often welcomed sleep after the fatigues of the day. We have reason to believe that dying is as painless as falling asleep; a feeling of languor steals over the frame, and the tired form settles into a dreamless sleep. The general testimony of all who have experienced what it is to die, and have been able to record their experience, goes to prove that death is easy and exempt from all pain. William Hunter, in his last moments, said, "Had I the strength to write, I would write how easy and delightful it is to die." Having met with an accident which it was supposed had proved fatal, Montaigne said, on restoration to consciousness, "I thought that life hung on my lips, and I closed my eyes to help me in expelling it; and I had a serene pleasure in the belief that I was passing away." These statements fully accord with the observations we have repeatedly made at the death-beds of patients. Persons who have been resuscitated after drowning, suffocation and strangling, and after all sensation had been lost, have asserted that, after the first shock, they experienced no pain. What is, therefore, often spoken of as the agony of death, is probably purely automatic, and unfelt. "Passing through nature to eternity," the sense of death is most in apprehension. Why, then, if this be true, should death be regarded as "the cup of trembling," and the event be signalized by the habiliments of mourning? When Nature puts on her death-robes, the autumnal forest assumes forms of beauty and even brilliancy; and departing day often crimsons the western horizon with glory; herein presenting striking contrasts in the manner in which death is received by nature and by man. "This flesh which we wear is the foliage of an immortal life, and there is no reason why it should not fade away in its season, still and peaceful as autumn leaves, that this interior life may flower forth anew in the glories of unending spring."

In man's departure, then, there is beneficence, just as in his

growth and maturity; and there is also design. The christian philosopher not only submits with resignation to the decay of his material form, but rejoices in the assured hope that so perfect and highly endowed a structure, teeming with evidences of beneficent design, has not been constructed merely to rise, flourish, and then to disappear without a future grand result, commensurate with so costly an expenditure of wisdom and goodness. INFINITE WISDOM, which designed and called forth man into being, would, it seems, forbid that such a creation should be comparatively vain, leaving only a dark blank as the memorial of its existence. In the dissolution of our mortal fabric we have been tracing its relationship to organic and inorganic nature, which is a succession of ceaseless change. Turn to the sun and stars, whose constitution the spectroscope has in recent years wonderfully revealed, to the grain of sand which is washed from the face of the surf-beaten rock to form again part of the bulwark of a distant shore—from the giant of the forest down to the tiny lichen in the cleft of the wall—from the leviathan of the deep down to the minutest monad —all are undergoing the same round of constant transition. Throughout the universe, as in the microcosm of man's body, the laws of disintegration and decay are balanced by those of reproduction and supply. Individuals, species, genera, all pass away, and are replaced by others. Man's brain, the highest organized machine, itself follows the universal law; but man himself is not thus mutable. The *ego* is one and the same, from the moment it first sprang into existence. That it exists unchanged by the ceaseless changes of the physical organism to which it is linked, is surely evidence that it is independent of matter, and that it will survive when the present order of nature has passed (*S. Wood*).

Death, then, is really but a transitional process by which the link which binds man to an earthly form is broken, and through which the good pass from an introductory and transient state of existence to one that is pure and immortal. "Death is a white-winged angel, fanning us with its wings, gathering us in its arms, and lifting us up into our eternal rest."

> "So live that when thy summons comes to join
> The innumerable caravan that moves

To that mysterious realm, where each shall take
His chamber in the silent halls of death,
Thou go not like the galley slave at night,
Scourged to his dungeon; but, sustained and soothed
By an unfaltering trust, approach thy grave
Like one that draws the drapery of his couch
About him, and lies down to pleasant dreams."

CHAPTER XIII.

ACCIDENTS.

Asphyxia—Apnœa (from drowning)—Suffocation.

Definition.—The term Asphyxia is generally used to express the effects of interrupted respiration, as in the case of drowning, hanging, a stroke of lightning, or breathing noxious vapors.

Symptoms.—There is no breathing, or action of the heart; the eyelids are generally half closed; the pupils dilated; the jaws clenched; the fingers semi-contracted; the tongue appearing between the teeth, and the mouth and nostrils are covered with a frothy mucus. Coldness and pallor of surface increase.

Treatment.—Not a moment's time should be lost. The patient should be attended to immediately, on the spot, while remedial aids are being fetched. All mere spectators and useless helpers should be sent away, as the admission of abundance of pure air to the patient is of first importance. When a drowned man is taken from the water, he should be first turned on his face to allow of the escape of water from his mouth and throat. Artificial respiration should be then attempted.

The directions for restoring the apparently dead, recommended by that noble organization, the Royal Humane Society, are so concise and complete, that we cannot do better than reproduce them, with a few alterations.

The points to be aimed at are—first, and immediately, the restoration of breathing; and secondly, after breathing is restored, the promotion of warmth and circulation.

Treatment to Restore Natural Breathing.

Rule 1.—*To Maintain a Free Entrance of Air into the Windpipe.*—Cleanse the mouth and nostrils from dirt, saliva, etc.; open the mouth; draw forward the patient's tongue, and keep it forward: an elastic band over the tongue and under the chin will answer this purpose. Remove all tight clothing from about the neck and chest.

Rule 2.—*To Adjust the Patient's Posture.*—Place the patient on his back on a flat surface, inclined a little from the feet upward;

FIG. 6—INSPIRATION.

FIG. 7—EXPIRATION.

To illustrate the position of the body during the employment of this method of inducing respiration.

raise and support the head and shoulders on a small firm cushion or folded article of dress placed under the shoulder-blades.

Rule 3.—*To Imitate the Movements of Breathing.*—(See engravings.) The operator, standing or kneeling behind and at the head of the patient, should grasp the patient's arm just above the elbows, and draw the arms gently and steadily upward, till they meet above the head (this is for the purpose of inspiration, or drawing air into the lungs), and keep the arms in that position for two seconds. He should then turn down the patient's arms, and press them gently and firmly for two seconds against the sides of the chest (this is with the object of pressing air out of the lungs, —expiration).

If an assistant compress with both hands, flat, the lower part of the ribs and diaphragm, when the patient's arms are turned down, the expiration will be facilitated. The operator and assistant must carefully act together.

As the process of artificial respiration is laborious, the best qualified assistants should be selected to take turns with the operator; but changing places must be rapid, that not a single respiratory movement may be missed.

Repeat these measures alternately, deliberately, and perseveringly, fifteen times in a minute, until a spontaneous effort to respire is perceived, immediately upon which cease to imitate the movements of breathing, and proceed to induce circulation and warmth according to Rule 5.

Should a warm bath be procurable, the body may be placed in it up to the neck, continuing to imitate the movements of breathing. Raise the body in twenty seconds in a sitting position, and dash cold water against the chest and face, and pass ammonia under the nose. The patient should not be kept in a warm bath longer than five or six minutes.

Rule 4.—*To Excite Inspiration.*—During the employment of the above method, excite the nostrils with snuff or smelling-salts, or tickle the throat with a feather. Rub the chest and face briskly, and dash cold and hot water alternately on them.

The efforts to restore life must be persevered in until the pulse and breathing have ceased for at least an hour, for well-attested instances of resuscitation are on record, after several hours of suspended animation.

Another method of effecting artificial respiration is by *catheterism of the trachea.* "The operator inflates from his own chest; but as he is able to drive in much more air than is absolutely necessary, its impurity is of no great consequence. An assistant must empty the patient's lungs by compression of the thorax between the insufflations."—*Shaw's Medical Remembrancer.*

Treatment After the Restoration of Natural Breathing.

Rule 5.—*To Induce Circulation and Warmth.*—Wrap the patient in dry blankets and commence rubbing the limbs upward, firmly and energetically. The friction must be continued under the blankets or over the dry clothing.

Promote the warmth of the body by the application of hot flannels, bottles or rubber-bags of hot water, heated bricks, etc., to the pit of the stomach, the arm-pits, between the thighs, and to the soles of the feet. Warm clothing may generally be obtained from bystanders.

On the restoration of life, when the power of swallowing has returned, a teaspoonful of warm water, small quantities of warm wine, warm brandy-and-water, or coffee, should be given. In some cases, an enema of beef-tea and brandy is to be preferred to administration by the mouth. The patient should be put into a warm bed, in a room well ventilated, and encouraged to sleep. Great care is requisite to maintain the restored vital actions, and at the same time to prevent undue excitement.

In cases of suffocation from hanging, the treatment is much the same, after the body has been cut down, and the ligature removed from the neck.

When a stroke of lightning has produced Asphyxia, the body should be dashed for ten or fifteen minutes with abundance of cold water to promote reaction. The body should also be diligently rubbed. But artificial respiration should be resorted to. A current of electricity passed through the chest, from breast to back, may prove beneficial.

Concussion of the Brain.

Definition.—An interruption to the functions of the brain, from a blow or other mechanical injury of the head; it may vary in degree from a slight stun to extinction of life.

Symptoms. — Insensibility; pale face; small or imperceptible pulse; stertorous breathing; cold extremities, etc. By shaking the patient, or calling his name loudly in his ears (which, however, should never be done), he may give a surly answer, and soon become insensible again. After a time, longer or shorter according to the severity of the injury, reaction comes on, and consciousness returns, often with vomiting. At first the reaction may be imperfect; it is often several days or even weeks before the power of the mind is restored.

Treatment.—*Arnica.*—Place two pellets upon the tongue, or moisten it with a few drops of the tincture by means of a feather or quill, and repeat the dose every hour for several times.

Aconitum.—Should be administered alternately with Arn. if fever attend the return of consciousness. But if there be danger of cerebral disturbance—headache, flushed face, or other head-symptoms—Acon. and Bell. should be alternated. *Opi.*—Stertorous breathing; constipation remaining after concussion. *Hyos.*—Delirium, low or furious. A dose every one, two, or three hours.

General Treatment. — The patient should be placed in a warm bed, with his head at first moderately low, and warmth applied to his extremities and axillæ. On no account should he be induced to eat or drink; he must also be kept very quiet, and no attempt made to arouse him. When reaction comes on, the head and shoulders should be raised a little, and cold evaporating lotions applied, keeping the patient at the same time in a cool, quiet room, with the light modified, and noise and conversation shut out. He must be under care for two or three weeks, lest some insidious inflammation should arise within the head.

Burns and Scalds.

Definition. — An injury produced by radiated heat from any hot body, or by direct contact of hot solid, liquid or gaseous substances.

Varieties.—(1) The Erythematous, producing mere redness, and soon terminating in resolution; (2) the Vesicated, in which the inflammation leads to the exudation of serum and the formation of vesicles, which, in slight cases, soon dry up and heal; or

if the skin has been much injured, may be succeeded by obstinate ulcers. (3) The Gangrenous, from destruction of the tissues. This variety, although usually exempt from pain, is by far the most serious.

The constitutional disturbances, and the periods of danger consequent on deep burns, have been divided into three stages: 1. Depression and congestion, during the first four or five days; 2. Reaction and inflammation in which the patient may sink, with an affection of the head, chest, or abdomen; and, 3. Suppuration and exhaustion, which may continue from the second week to the close, and are often associated with Hectic, or Pleurisy. The danger of burns often depends more upon their superficial extent than upon the depth of the injury. Burns on the trunk, head, or neck, are far more perilous than those of an equal extent on the extremities. Children appear to suffer much more severely from burns than adults.

Treatment.—A most important object to be attained is to cover the injured part with some suitable material that shall exclude atmospheric air, which should not be removed till the cure is complete. One of the following local applications is recommended:—

1. *Carbolic Acid and Olive Oil.*—One part of the Acid (as prepared for medicinal uses) to six parts of olive oil is found to be invaluable in most cases, slight or severe. It is cleaner, more easy of application, and more soothing than most other remedies. One layer of lint put on at first should not be removed; this should be kept saturated by the removal of outer layers from time to time. When the wound is healed it is easily and comfortably dispensed with. As a domestic remedy, it is recommended to be kept always ready for burns and scalds, just as Arnica, Calendula, etc., are kept ready for other kinds of accidents.

The application of a lotion of Urtica Urens (twenty drops of the tincture to an ounce of water) in the simplest cases, or of Cantharides (ten drops of the tincture to an ounce of water) when blisters are forming, by means of cotton-wool, is of great service. Kreas. is also sometimes useful. [Also Sedative Saxoline.]

2. *Soap.*—Moisten white or brown soap in water, and rub it on

a piece of linen so that the soap forms a coating on the linen as thick as a shilling, and larger than the wound it is intended to cover, so that it may the more perfectly exclude the air.

3. *Flour or Starch.*—One of these may be used as a substitute in the event of either of the above not being at hand. Wheaten flour or finely-powdered starch should be uniformly and thickly applied by an ordinary dredger, so as to form a thick crust by admixture with the fluids discharged from the broken surface, thus excluding the air; and repeated when any portions fall off. Flour is, however, inferior to Carbolic Acid, and its after-management is more difficult.

The points of greatest importance are immediate application of the local remedy, complete exclusion of atmospheric air, and unfrequent changing of the dressings — not, indeed, until they have become loosened or fœtid from the discharges. A complete change of dressing often causes pain, depression, and the detachment of portions of the new skin, and so retards the cure.

When, after the removal of the first dressing, ulcers exist, Calendula or Glycerine cerate, or a mixture of Urtica Urens and Olive Oil (one part to six), is a suitable application. Any discharge should be carefully removed, and the parts kept as clean as possible.

Internal treatment, except in slight cases, is always necessary, and must be suited to the part injured, its extent, and the constitutional symptoms present. As a general rule, Acon., early, does good, by allaying febrile symptoms, mitigating pain, and moderating reaction. Arsenicum is valuable if ulcers form, or if the burn present a gangrenous appearance. Sec. and Carbo V. are also useful in the latter condition.

Contusion—Bruise.

Definition.—An injury inflicted on the surface of the body by mechanical violence, without laceration of the skin. It may be either slight, involving only the rupture of minute subcutaneous blood-vessels, and perhaps the tearing of some muscular fibres, or a large blood-vessel may be torn; or even disorganization of the tissues beneath the skin may be caused, as from the dull force of a spent cannon-ball. The remarkable properties of

elasticity and toughness possessed by the skin often permit serious damage to its underlying structures while it remains entire.

Causes.—A blow from a hard, blunt body; forcible pressure between two forces, as a wheel passing over a limb and crushing it; or indirectly, as when the hip-joint is contused by a person falling on his feet from a height.

Treatment.—In the less severe form of bruises, which alone are prescribed for here, the object should be to excite, as speedily as possible, the absorption of extravasated blood. To this end the bruised part should be raised, and a warm Arnica lotion (one part of the strong tincture to ten of water) immediately applied by saturating lint with the lotion, and covering it with oil-silk, to exclude the air. The value of this application is undoubted, and happily is now becoming generally recognized. If the patient has a predisposition to Erysipelas, Ham. should be used instead of Arn. In contusions involving glandular structures, as the female breast, Coni. is recommended; or when the covering of bone, as of the shin, is involved, Ruta. When pain or tenderness has subsided, a bandage should be applied. Leeches or punctures, where there is any chance of procuring absorption by other means, should never be resorted to, as air would thus be admitted to the part, and suppuration set up.

Ecchymosis.—This is discoloration of the skin following a bruise, and is produced by extravasated blood under the skin. It is first of a reddish color, but speedily becomes black. During recovery, the parts change, first to a violet color—the line which defines the bruise becoming indistinct—afterwards to a green, then yellow; and thus, sooner or later, according to the health of the individual, or the quantity of blood poured out, the discoloration disappears. Black-eye is a common instance of ecchymosis.

Arnica lotion has great power in preventing this condition if used immediately after an accident. When extravasation has already occurred, Hamamelis lotion (one part to six of water) is more appropriate.

Sprain—Strain.

Definition.—An overstretching of the ligaments and tendons, generally with a rupture of some of their fibres.

Treatment.—The immediate treatment consists in the application of hot water, as hot as can be borne, until the pain is considerably modified, followed by a compress of cloths moistened with a lotion of Acon., Arn., Rhus, Ruta, or Hyper., and covered with oil-silk. The remedy used for the lotion may also be taken internally.

Acon., in alternation with Rhus, may be administered, when the joint becomes swollen and painful; and when constitutional disturbance attends the injury.

When the pain and swelling subside, good strapping is better than the compress, as it supports the muscles during exercise, and does away with the necessity for prolonged rest. Care, however, should be observed for several weeks, as the injury may easily be re-induced, and then the cure becomes difficult and tedious, especially if the patient has a rheumatic tendency.

Wound.

Definition.—A solution of continuity, or separation, by external violence, of parts naturally united.

Wounds are termed incised, when made by clean-cutting instruments; punctured, when the depth exceeds the breadth, as stabs; lacerated, when the parts are torn and the lips of the wounds irregular; contused, when effected by bruising. We may also add that a gun-shot wound is termed penetrating, when the shot is lodged in the part; perforated, when it passes through it; and, according to law, burns.

Treatment.—The following are the chief points:—1st. *To arrest the bleeding.*—In most cases, the elevation of the part, keeping the bleeding surface uppermost, the application of cold, moderate pressure, and the co-aptation of the edges of the wound, will suffice. A Calendula lotion tends to arrest hemorrhage and check suppuration. In severe wounds involving arteries, the parts should be laid open by a surgeon, and the wounded vessels ligatured.

2nd.—*The removal of foreign bodies.*—Dirt, hairs, glass, clots of blood, etc., should be speedily removed by the fingers, forceps, or sponge and water.

3rd.—*To bring the injured parts into nice apposition.*—Any

muscular fibres likely to prevent complete union should be relaxed, or divided, and after the sides of the wound have been accurately adjusted, they must be kept so by strips of adhesive plaster, first applied to that side of the wound which is most movable, and then secured to the other. But, in extensive wounds, where plaster would be insufficient, stitches should be employed.

4th.—*To promote adhesion.*—To secure this, the part should be kept at rest, and if the injury be severe, the patient should remain in bed.

5th.—When a wound is dressed, say once in every twenty-four hours, a rag or sponge wetted with warm water should be laid over the dressing, so that it may be removed without the risk of disturbing the surfaces which may have partially united. Lotions may often be renewed by removing the oil-silk only, and dropping lotion on the rag or lint, or pouring it on by means of a spoon, and then replacing the oil-silk.

6th.—*To control dangerous bleeding*, as from a sharp-cutting instrument. When blood flows in a steady stream, and is dark-colored, it is from a vein, and can generally be checked by applying cold water, and exposing the cut surface to the cold air. But if large veins be wounded, they should be compressed with the fingers, or by a bandage. A few thicknesses of linen, with steady compression, are more efficient than heaping on a large quantity. Bright-red blood, flowing in jets, is arterial, and similar means must be adopted as just pointed out, unless the bleeding be excessive, in which case a handkerchief should be tied round the limb near the wound, and between it and the heart; a stick inserted under the handkerchief and a firm compress over the course of the blood-vessel; the stick should then be twisted (Fig 8) until it stops the circulation, and, consequently, the bleeding. But such means are only temporary, as wounded arteries of size require to be ligatured by a surgeon before bleeding can be permanently arrested. If no surgeon can be obtained, a clever

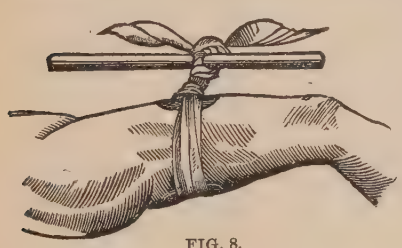


FIG. 8.

manipulator should grasp the wounded artery with a pair of forceps, and draw it slightly and gently forward, so that it may be securely tied by means of a strong ligature of silk; or hemorrhage may be arrested by twisting the end of the artery round and round until it will not untwist itself. The latter method is designated torsion.

7th.—Should a wound or bruise be followed by constitutional disturbance—fever, chills, and throbbing in the parts—internal medicines should be administered.

Arn. (as prepared for internal use) and Acon. will generally meet the requirements of such cases, and should be administered every three hours, in alternation, for several times; or if the injured part be very painful and swollen, with congestive headache, etc., Bell. may be alternated with Acon.; or with Hep.-S., when suppuration is established, or Sil., when the suppuration is unhealthy.

Cuts.—The treatment of this variety of wounds, if only of moderate size, is generally simple. The edges of the cut should be brought together and maintained so by narrow strips of adhesive plaster; then, if necessary, a bandage applied over the plaster. In two or three days the plaster should be removed without disturbing the union, and replaced by new. If, however, inflammation and pain occur, the application of lint, saturated with Calendula lotion, covered with oil-silk, and a bandage over all, is necessary.

Foreign Bodies.

Treatment.—Any foreign body in the flesh—glass, a thorn, splinter, broken needle, etc.—should be removed as quickly as possible, by the fingers or by forceps, or sponge and water if the wound is lacerated.

Foreign Bodies in the Eye.—If sand, flies, or hairs, are between the lids and the globe, they should be removed immediately by bathing the eye; but if the substance cannot be removed in this manner, the eye should be gently wiped with a soft, moistened handkerchief, or with a feather, or a bent bristle may be used, the two ends being held by the finger and thumb. In one of these ways, with a little perseverance, the offending substance may generally be removed.

If small pieces of flint or iron become fixed in the front part of the eye, they should be most carefully picked out with a needle or the point of a lancet. If the intruder be in the upper eyelid, the lid should be everted.

Mortar or lime is rapidly destructive. If seen immediately, the eye should be washed with a tepid solution of vinegar (one dram to two ounces of water). The lids should be everted, and every particle of lime removed. Grains of gunpowder may be removed with plain tepid water.

When the foreign body is removed, a weak Arnica lotion should be applied to the eye by means of lint or soft linen, and covered to prevent evaporation.

Foreign Bodies in the Ear.—Peas, stones, slate-pencil, glass-beads, shells, etc., are sometimes found in the ear passage; or cotton-wool which has been forgotten, or a portion of which only has been removed, is occasionally met with. If permitted to remain, such substances rarely occasion any untoward symptoms, although they may continue a long time, till uneasiness in the ear leads to an examination of the tube. Any such body should be removed as gently as possible, either by syringing the ear with warm water, or other simple means. An insect will instantly retreat if a drop of sweet oil be let drop into the ear. If the foreign body cannot be removed by gentle means, the case should be submitted to a surgeon, so that a careful examination may be made by means of the ear-speculum and the aid of sunlight or a lamp. This examination is necessary for two reasons; for although a foreign body, if present, may generally be seen without such means, still the absence of such body cannot be affirmed without a complete exploration of the tube. Further, instances often occur in which surgeons are requested to remove a foreign body when none exists, and a proper examination with the speculum would prevent an injudicious meddling with instruments. A late eminent hospital surgeon is said to have dragged out the little bones of the ear (*stapes*) whilst attempting to find a small nail, which was not in the ear at all! A careful exploration of the canal, as above suggested, would have prevented such a serious practical mistake. Any soreness or inflammatory symptom that may ensue from the foreign body, or the attempts

at extraction, should be met by the application of a weak Arnica lotion (six drops of tincture of Arnica to two tablespoonfuls of water).

Fracture—Broken Bone.

A few words on the immediate management of cases of broken bones seem necessary in this work, as a surgeon is not always just at hand, and it is necessary to be prepared to act till surgical attendance can be had.

Symptoms.—A fractured bone may generally be detected by having felt or heard it snap; by some deformity, such as bending or shortening; by the fact that if the upper end of the bone is held firmly by the hand, the lower part may be moved independently; also by a grating noise (*crepitus*), which may be heard if the broken ends are rubbed against each other. Further, there will be pain, loss of power of the broken part, and other symptoms. Fracture is said to be simple when there is no wound of the skin communicating with it; compound when there is such a wound.

Causes.—Mechanical violence is the most frequent; but muscular contraction is sometimes a cause. Old age, some diseases, excessive drugging with Mercury, and prolonged disuse of a limb, render bones liable to fracture from trifling causes.

Immediate Treatment.—A broken leg should be fastened to the whole one by a handkerchief at the ankle, and above and below the knee, before the patient is removed.

A fractured arm requires the immediate support of a sling, which may be made by a handkerchief and fastened round the neck.

Broken ribs require a flannel bandage, about two hands broad, round the chest, with shoulder-straps to keep it up. A rather tight-fitting bandage lessens the movement of the chest in breathing, and is a great comfort. Flannel is better than linen, as it is more elastic.

The patient must be moved gently, and special care taken to prevent the broken bone from being forced through the flesh and skin. He should be placed on a stretcher or litter, and taken to his home, or to an hospital. A litter may be made of a couple of

poles and a horse cloth or sack; even a door may serve the purpose. Placing him on this, and carrying him by two men, is much better than removal in a cart or carriage. It is important not to be in a hurry, as an injury is often greatly aggravated by carelessness or too hurried measures. When a surgeon is within moderate distance, after making the patient as comfortable as possible, it is better to wait a little, so that he may superintend the moving.

When there is a wound and much bleeding, see Section on "Wounds."

When the patient has been placed on a firm bed or mattress, and the injured part examined, the surgeon will bring the broken ends of the bone into close apposition, and in their natural form, and having done this, maintain them so, and at rest, till firm union has taken place. To maintain the proper shape and length of the limb, bandages, splints, and other apparatus are required. Little can be done, however, beyond a merely temporary arrangement, until the surgeon arrives, as these cases can only be properly treated by a professional man.

Exhaustion of the Muscles—Fatigue—Over-exertion.

Definition.—A condition of the muscular system induced by an undue drain on its strength.

Treatment.—If the feet be swollen or blistered, or the ankles ache after walking, a warm foot-bath may be used, to which a teaspoonful of the strong tincture of Arn. has been added; the relief afforded is often immediate and permanent. If the hands or wrists ache from excessive or unaccustomed exertion, they may be bathed in about a pint of water, to which twenty or thirty drops of Arn. have been added. If necessary, in one or two hours the application may be repeated. In muscular fatigue from long continued or severe exertion, affecting the hips, thighs, etc., a hip-bath, to which a drachm of the strong tincture of Arn. has been added, is an excellent remedy. The patient should remain in the bath about five minutes. Whatever kind of bath is used, and to whatever part applied, it should be warm if used in the evening or soon after exertion, but cold or tepid in the morning.

Arn. should be administered whenever there is muscular fatigue, from whatever cause. Its power to aid the restoration of exhausted muscle is truly wonderful.

Accessory Measures.—When suffering from fatigue, a light repast only should be taken; a full heavy meal might occasion serious embarrassment to the digestive organs, as they equally suffer from the general weariness.

Poisons.

When it is known that a deleterious substance has been swallowed, as Arsenic and other mineral poisons, Opium, poisonous fish, alcohol, etc., vomiting should be immediately excited, by tickling the back of the throat with a feather or the finger; or, if this fail, by the administration of an emetic.

Emetic.—The following is a convenient emetic: for a child, a teaspoonful of mustard in a teacupful of warm water; for an adult —a dessert-spoonful in a breakfast-cupful of water. This may be repeated as often as necessary, and followed by copious draughts of warm water, so as to empty the stomach as completely as possible. But if Arsenic, or Tartar Emetic, be the poison, no warm fluids should be used, as they tend to increase the activity of the drug.

A List of Poisons and Their Antidotes.*

Poison Ivy.—For poisoning by poison ivy, apply a solution of (5 per cent.) Carbolic Acid.

Snake Bites.—Immediately apply a ligature above the wound, cleanse the wound thoroughly and cauterize with either of the mineral acids; in the absence of mineral acids apply strong carbolic acid. Give internally, either brandy or whisky in large quantities or appreciable doses of aro. spirits of ammonia.

Bites of Rabid Animals.—Immediately ligate (if location of the wound admits of it), and then suck out the wound and cauterize at once, with either of the mineral acids (nitric acid is preferable), or with solid nitrate of silver. When sloughing occurs, poultice to keep up suppuration. Belladonna and opium may be given in small doses (internally), for months after.

*See American Homœopathic Dispensatory.

Elecampane (*inula helenium*) in milk is alleged to have been successfully employed in the treatment of hydrophobia.

Poison by Bees and Insects.—Apply spirits of camphor, aqua ammonia, saturated solution of bicarbonate of soda, or a solution (2½ per cent.) of carbolic acid.

Hydrate of Chloral.—For poisoning by hydrate of chloral: Give strong coffee, or stimulants. Induce artificial respiration, apply electricity, and give patient hot bath, or pack. Employ stomach-pump, and give ammonia, caffein and strychnia hypodermatically.

The Acids.—For poisoning by sulphuric, muriatic, and nitric acids: Give freely of the carbonates of lime (chalk or whiting), magnesia, soda (washing or baking soda), and potassa (sal. tartar) in milk, or, in some mucilaginous drink. In case of poisoning by nitric acid give carbonates of lime and magnesia, but do not give either carbonates of soda or potassa. In the absence of these, give strong soapsuds, plaster from the walls, linseed tea, linseed oil, sweet or olive oil, corn-meal gruel, and barley water.

Opium.—For poisoning by opium (morphia): Use stomach-pump, or give an emetic of zinc or mustard water at once. Give infusion of strong coffee, or a solution of either tannic or gallic acid. Give of the tincture of Belladonna, Hyoscyamus, or Stramonium (30 to 60 minims) as the urgency of the case demands. "Caffein, strychnia, and atropia sulph. hypodermatically (1-20 gr. atropia antagonizes 1 gr. morphia)." Keep patient walking, and flagellate the legs with a wet cloth, to prevent sleep. Apply electricity (faradic current) to the spine. Induce artificial respiration and give stimulants when required.

Alcohol.—For poisoning by spirituous liquors, such as brandy, whisky, gin, etc.: Give freely of warm mustard water, or of a solution of sulphate of zinc (15 or 20 grs.) or tartar emetic (1 to 2 grs.). Apply cold douche to the head, and in case of great coldness of the extremities warm flannels and friction. In severe cases ammonia, digitalis, and caffein are to be given hypodermatically.

Strychnia.—For poisoning by nux vomica (strychnia): Give an emetic of sulphate of zinc, or use stomach-pump. Give solution of tannic or gallic acid. Give full doses of opium when

required. Give bromide of potassium in large doses. Give chloroform to diminish tetanic spasms, particularly of the glottis. Give stimulants if required.

The treatment of cases of poisoning must be considerably modified according to the nature of the poison, and a medical man should be summoned immediately, while the temporary measures just suggested may be resorted to until he arrives.

PART IV.

DISEASES OF WOMEN.

CHAPTER I.

MENSTRUATION.

Puberty.

Puberty is the period in which the general development and growth of the female have so far advanced as to render her capable of bearing children.

At the approach of puberty a striking change is effected in the general system. The pelvis, although far from being yet mature, enlarges, and takes on its distinctive sexual character, the breasts become rounded and full, and establish their connection and sympathy with the womb; the chest, throat, arms, and, indeed, the whole body, acquire the contour of a more mature development; the hair grows more luxuriantly; the skin becomes fresh and blooming, the voice full and mellow; and the whole figure assumes that elegance of symmetry, the complexion, that bloom of health and beauty, and each feature and action, that play of intellect and emotion, and that indescribable gracefulness of action, which are to be found in woman alone.

This combination of attractions which marks the epoch of puberty is no doubt designed to subserve the purpose of alluring the opposite sex, and so securing one great object for which the female was created—the reproduction of the species.

Corresponding with the external changes coincident with puberty are internal ones, occurring especially in the ovaries and uterus, which now become fully developed, both as to size and activity. In short, the woman has now, as a rule, acquired the power to conceive.

The mind, too, at this period, grows rapidly; the mental capacity enlarges, the imagination becomes more vivid, and the nervous system exhibits a heightened sensibility.

As puberty advances, no mother should neglect to teach her daughter to expect the change which is about to take place, so that the first appearance of the menstrual flow may neither be arrested by the alarm naturally felt at something hitherto inexperienced or unknown, nor by the dangerous applications to which in her ignorance she may otherwise secretly resort. Some young women view the development of this function with such disgust, that they expose themselves carelessly or purposely during the period to cold and wet, or use cold baths or other means of suppression, and thus finally bring on disordered menstruation and permanent ill-health. Many such cases have occurred within our own experience.

The Function of Menstruation.

The menstrual function, which is variously termed menses, periods, catamenia, or courses, is one of the most important functions of the female organization, and constitutes a real monthly crisis. It consists of an exudation of sanguineous fluid, chiefly from the body of the uterus, the average quantity being from four to six ounces at each period, and is attended by a congested state of the uterus, ovaries, and contiguous organs. Although the discharge proceeds from the uterus, the function depends on the ovaries for the stimulus necessary for its first appearance, for its regular recurrence, and for its due performance. The course of the menses recurs, in the majority of instances, every twenty-eighth day, the very day on which it had appeared four weeks previously. The duration of a menstrual period varies in different persons, the most common and normal being about four days.

The menstrual fluid is eliminated from the uterine vessels, and

is considered by some as a true secretion, and by others as a discharge of pure blood. The latter opinion is the correct one. The discharge is blood, and not a mere secretion. It is prevented from coagulating by being blended with the acid secretion of the uterus and vagina. The addition of a small quantity of acetic, phosphoric, or of almost any acid to ordinary blood, will prevent its coagulation, and render it similar in its properties and appearance to menstrual blood. In cases, however, in which the discharge is so profuse that a portion of its coagulating constituent —the fibrin—escapes without intermixture with the acid secretion, clots are formed. Thus it appears that true menstrual blood, uncombined with the normally acid uterine and vaginal secretion, is like ordinary blood, and equally capable of coagulation; but that being immediately blended with this acid secretion, it is enabled to pass off in an uninterrupted course. And here may be observed one of those wise and beneficent contrivances of the Creator and Preserver of all, which so frequently excite the wonder and admiration of the physiologist. If no such acid solvent as that of the vagina existed, the coagulated menstrual blood would, in consequence of its consistency, be prevented from passing along the vaginal canal, and would thus become a mass of putrid matter, entailing consequences which would be fearful in the extreme.

Two ends seem to be especially secured by this function:—1st, the relief of the general system, by the discharge of the superabundant blood which during pregnancy is appropriated to the formation and growth of the fœtus; 2nd, a vicarious satisfaction of the sexual instinct, thus shielding female chastity. The modern doctrine, however, is that menstruation takes place when the ovum, not having been impregnated, undergoes degeneration, and is cast off with an escape of blood from the congested uterus in sufficient quantity to relieve the congestion.

First Menstruation.—In this country the most common time for the occurrence of the first menstruation is from the twelfth to the sixteenth year, although the age is liable to considerable variations. In hot climates it commences at an earlier, in cold climates at a more advanced age. The occurrence of menstruation in this country one or two, or even three years earlier than

the fourteenth year, or as much later than the sixteenth, is not sufficiently uncommon to justify medical interference when the health is otherwise good. Menstruation commences earlier in cities and large towns than in the country. It also occurs in the daughters of the rich—who have every comfort and luxury, everything which enervates and relaxes, or excites—at least nine months before it does in those of the industrious classes of the community in the most comfortable circumstances; and full fourteen months, on the average, before it appears in the poorest classes. Its earlier occurrence among the well-to-do classes, and later among the poorest, its scantiness among women in the savage state, and its entire absence among the lower mammals, seem to indicate that the function may be due to enervation incident to civic life and a highly artificial state of society, and not to any actual necessity of the organism.

It is satisfactorily established, that in every country and climate the period of the first menstruation may be retarded, in very many cases, much beyond the average age, often without producing ill-health or other inconvenience. Indeed, the longer it can be postponed the less will be the draught on the vascular and nervous energy which are essential to the consolidation of the functions of nutrition and growth. And it should be borne in mind that the premature accession of menstruation is almost certain to be followed by the early disappearance of the function. Probably the most successful mode of managing young ladies is to bring them as far toward the perfection of womanhood as possible before the appearance of the menses, at least until the fourteenth or fifteenth year. With this object in view, the following suggestions are offered:

Hints for Preventing too Early Menstruation.—The use of hot baths, especially with the addition of mustard, should be avoided; also indulgence in the use of hot, spiced, and stimulating food and drinks; living in overheated or badly ventilated rooms; excessive dancing, novel-reading, too much sitting, and late hours: such habits and indulgences tend to occasion precocious, frequent, copious, or irregular menstruation.

The education and general habits of our present social condition too frequently produce such a pressure upon life that its succes-

sive stages are hurried through, and the tastes and peculiarities of one period are anticipated in that which should precede it. Thus, mere boys in age and physical development become young men, and girls, young ladies, before they leave school. Such is the precociousness which the habits and fashions of the present generation engender.

On the other hand, regular healthy occupation of both the body and the mind; the daily use of cold baths, or cold sponging over the entire surface of the body; free exercise in the open air; cool, well-ventilated rooms; plain, digestible diet, and abstinence from hot tea, coffee, and alcoholic stimulants, tend to the healthy and highest development of the female form and constitution.

Sudden Menstruation.—It is not always, however, that this function advances gradually and in harmony with the changes described. Menstruation may occur for the first time prematurely, and be caused by a severe fall, violent jumping, great mental emotion, etc. In such cases there may be a considerable flow, amounting in some instances to absolute flooding, and lasting for several days. It is important that these facts should be known by mothers, so that in sudden and extreme instances they may not only maintain their own composure, and inspire it in others, but efficiently carry out the following important—

Treatment. — A few doses of Aconitum, if resulting from mental emotions, or of Arnica, if occasioned by injury or severe physicial exertion, together with rest in the recumbent posture, light covering, a cool and well-ventilated apartment, and cool drinks, will often be sufficient to modify the discharge; but if they should not do so, they will at least suitably precede the application of the more detailed treatment suggested in subsequent parts of this book, and prepare the way for the attendance of a homœopathic practitioner if required.

In other cases, the occurrence of the menses may be long delayed, and the delay attended with excessive languor, drowsiness, periodic sickness, fretfulness, irritability or frequent change of temper, violent pain in the head or along the spine and in the region of the bowels, a feeling of weight or fullness in the pelvic region, with bearing-down or dragging sensation, tenderness or heat; and these symptoms may alternate with feverish reaction,

with nervous symptoms, or even with spasms. The local symptoms, and their periodicity, are the most characteristic.

The establishment of menstruation is sometimes accompanied by derangements of the venous, digestive, or lymphatic systems; and unless these are successfully treated at this period they may be present, in a greater or less degree, during every subsequent recurrence of the menstrual discharge.

If the catamenial function be well and healthily established, new impulses will be given to every nerve and organ, and the system will acquire superior forces for resisting influences adverse to health. But carelessness, or constitutional delicacy, may render this period extremely dangerous by the propagation of new forms of disease, or by the development of any latent germs of disorder which have existed from birth. Hence the first appearance of the menses should be looked for with some care and anxiety on the part of the mother or guardian, and when it is long retarded, the general health disturbed, and the remedies suggested in this work appear inoperative in developing the desired change, professional advice should be sought without delay. False delicacy and improper treatment have needlessly undermined the health of thousands.

The mother should, for some months at least, keep an account of dates and other particulars, and prevent all unusual exposure for a few days before the expected flow, such as to night air, damp linen, thin dresses, wet feet, balls, and evening entertainments. When the function has once become healthily established, it is satisfactory to know that extreme precautions need no longer be observed.

Delay of the First Menstruation (*Amenorrhœa*).

Definition.—The term *Amenorrhœa* is used to describe absence of the menstrual discharge, and is usually considered under three divisions,—namely, (1) *Emansio mensium*, a delay of the menses, although the person has attained the proper age; (2) *Suppressio mensium*, in which they have appeared, but, as the consequence of cold or some other cause, are arrested; and (3) *Retentio mensium*, in which they accumulate in the uterus and vagina, from what is technically termed *imperforate hymen;* or

more frequently, from occlusion of the vagina by the healing of ulcers, the consequence of sloughing after difficult labors. This condition usually requires surgical measures for its relief.

This Section is devoted to the first form, or Delayed menstruation. As before stated, the period at which the "change" first takes place varies in different constitutions, climates, and under different circumstances, and no active medicinal means should be used so long as the health continues good. Emmenagogues, or forcing medicines, such as herb-tea, and other allopathic expedients, must be entirely and imperatively eschewed.

Symptoms.—When all the external signs of womanhood have appeared, but without menstruation, there are aching, fullness and heaviness of the head, bleeding from the nose, palpitation of the heart, shortness of breath on slight exertion, weariness of the limbs, pains in the small of the back, in the lower part of the bowels, and down the inside of the thighs—and these symptoms may be regarded as so many indications that nature is seeking to establish this important function, and that the administration of one or more of the following medicines according to the indications present may be called for.

Causes.—It is important, first of all, that the cause should, if possible, be definitely ascertained. The immediate cause is probably an inability of the nervous centers to stimulate the ovaries. Delay of the menses from this cause rarely occurs in healthy and vigorous persons, but usually follows as a consequence of original delicacy of constitution, or of some long standing affection. The very common notion that a patient suffers because she does not menstruate is very fallacious. Except in *Retentio mensium*, the patient does not suffer from an accumulation. Hence the impropriety of giving forcing medicines, which is frequently done, often to the permanent injury of the as yet imperfectly developed organs. We have known instances of extreme periodic suffering, continued for many years, traceable to this injudicious treatment. In many cases, too, it will be found that the disturbances supposed to be due to delayed menstruation really arise from the patient having taken too little, or innutritious food, or from her habits having been too sedentary or artificial, or from too little out-of-door air and exercise; or, in brief, from her being subjected

to influences inimical to her general good health, during a critical period of her physical development.

Tardy menstruation is especially significant in those girls who are predisposed to any form of Consumption. In this class of persons it implies a depraved habit of body in which the menses may not appear at all, or in which a vicarious flow of blood is very apt to take place from one or another of the mucous surfaces, more especially from those which line the respiratory passages. If the young girl who has not menstruated, although she may be fourteen or fifteen years of age, has a cough or difficulty of breathing, a sore throat, hoarseness, or pain in her side, it should be taken as a symptom of ill health, and measures immediately instituted for its relief. The quaint old rule should, however, not be lost sight of: "She is not sick because she does not menstruate, but she does not menstruate because she is sick."

Treatment.—If no congenital deformity or mechanical obstruction exist, the delay being evidently due to constitutional causes, one of the following remedies, the most important of which are Ferrum, Pulsatilla, and Sepia, together with the accessory measures afterwards referred to, may be expected to be successful.

Arsenicum.—Poor appetite; great prostration and emaciation; swelling of the ankles, feet, or face, and corrosive leucorrhœa.

Bryonia.—Bleeding from the nose, or spitting of blood instead of the menstrual discharge; hard, dry cough, stitches in the chest, constipation, and muscular rheumatism.

Calcarea Carb.—Scrofulous constitution, chronic indigestion, milky leucorrhœa, glandular swellings of the neck, vertigo, chronic headache, cold extremities, and cough, worse in the morning, are symptoms often present in cases requiring this remedy.

Cimicifuga.—Deficient nervous energy in the ovaries, with excess in other organs, manifested by extreme nervousness, hysteria, heavy headache, chorea, pain under the left breast, and in the left side generally, and rheumatic pains.

Conium.—This medicine is particularly suitable for women with tight, rigid fibers, and who are easily excited. Pain or swelling in the ovaries, with leucorrhœa of a white, acrid character, are strong indications for this remedy.

Ferrum.—Debility, languor, palpitation, indigestion, sometimes leucorrhœa, sickly complexion, puffiness of the face or ankles, and other anæmic and chlorotic symptoms. (See the Section on "Chlorosis.")

Iodine—Scrofulous patients, with enlarged glands and a lymphatic constitution, corrosive leucorrhœa, and feeling of much weakness on going upstairs.

Nux Vomica.—Congestive morning headache, constipation, frequent acute indigestion, spasms, etc. Nux V. is suited to patients of dark complexion, energetic, vehement, and irritable disposition, and to those who take too little out-of-door exercise.

Phosphorus.—For delicate constitutions, with sensitive lungs, and a predisposition to disease of those organs. Sometimes, in such cases, instead of the menstrual discharge, expectoration of blood in small quantities occurs, with cough, and pains in the region of the chest.

Pulsatilla.—Pains in the abdomen and across the back; hysterical symptoms, alternate laughing and crying, nausea and vomiting, palpitation of the heart, indigestion, and loss of appetite. Puls. is chiefly suitable for patients of light complexion, fair hair, and timid, easily vexed, yet uncomplaining dispositions.

Senecio.—This remedy administered during the inter-menstrual periods has proved eminently successful, and seems to possess alike the power to restore the secretion when suppressed, of augmenting it when deficient, and of diminishing it when excessive, as also of alleviating the pain of Dysmenorrhœa. It may be stated to act as a uterine tonic, invigorating the catamenial function, and restoring equilibrium of action.

Sepia.—Delay of the period in persons at the proper age (from venous congestion), with distention or pain in the abdomen, giddiness, nervous headache, easily-flushed face, fine sensitive skin; retiring, melancholic disposition.

Sulphur.—Scrofulous patients, troubled with Leucorrhœa, and itching of the genital organs.

Veratrum.—Cold hands and feet; hysteric and fainting fits; nausea, vomiting, and tendency to diarrhœa.

Administration.—The selected remedy may be administered in the morning on rising, one or two hours before dinner, and on

retiring to bed. When the symptoms are urgent, every one, two, or four hours. In chronic cases, morning and night.

Accessory Treatment. The feet should be kept warm and dry, and comfort, rather than fashion, should determine the entire clothing arrangements. Delayed menstruation is often the consequence of exposure to cold, or defective circulation in the surface, which warm clothing would obviate. It is especially necessary that the abdomen be kept warm; the necessity for wearing drawers, to protect it from cold, must, therefore, be obvious. Too studious and sedentary habits should be corrected; exercise taken out-of-doors, particularly in the morning, including walking, running, and the games of skipping-rope, battledore and shuttlecock, trundling the hoop, etc., as they are powerful auxiliaries in obtaining health of body and vigor of mind. These exercises are likely to be yet more efficacious if practiced in the country, on a dry, sandy soil, and in pure and bracing air. If pleasant company can be added to the charms afforded by diversity of scene, the advantages will be still greater. All these means should be aided by a carefully selected nourishing diet, taken at regular hours, three times a day, consisting of easily digestible food, in due proportions from the animal and vegetable kingdoms. All made dishes, high seasoning, spices, etc., should be especially avoided; also, except in great moderation, the use of tea and coffee.

The Cold Sitz-Bath. — In Amenorrhœa this is a powerful means of stimulating the menstrual function, but is not advisable when the patient is very feeble, or anæmic, or when there is reason to suspect constitutional disease as the cause of the dormant function.

The patient should sit in a hip-bath containing water at a temperature of 50 to 60 deg., sufficient to cover the hips, the legs and feet not being immersed, but kept warm by means of flannel wraps, or a hot foot-bottle or bath; the shoulders also being covered. The bath should be taken at bed-time, and last from five to fifteen minutes, gradually increasing the time as the patient can bear it. On leaving the bath, the patient should be well rubbed with a bath-sheet or large towel till warm, and instantly retire to bed. If chilly, a hot-water bottle may be applied to the

feet. But should she remain uncomfortable, the bath should be discontinued, or given for a very short period. In suitable cases it may be continued every night for a week or two. The spinal ice-bag is also a valuable accessory.

Amenorrhœa and General Ill-health. — It is most important, as may be inferred from preceding observations, to recognize the connection, as cause and effect, between general deranged health and the absence of menstruation. The function of menstruation, like the other functions of the body, is best performed when the system is in health. Now health is not promoted by redundancy or excessive action, any more than by debility or enfeebled action; consequently, the administration of stimulants will rarely hasten the menstrual function, even in cases of debility, unless attention be paid to the restoration of the general health of the patient.

With these views we have prescribed Pulsatilla, Ferrum, Phosphorus, Cimicifuga, etc., not as mere emmenagogues, but rather as efficient and well-tried agents for aiding in the removal of that defect in the health, or general functional inactivity of the body, which is the real cause of the evil. The experience of all homœopathic physicians proves that the first effect of our treatment in cases of delayed menstruation is the improvement of the general health and spirits of the patient, the Amenorrhœa at length disappearing as evidence that the cure is complete.

Caution. — Here let it be observed, once for all, that the attempt to remedy any defect in menstruation by spirits, decoctions of herbs, by the pills which are procured with such fatal facility at druggists' shops, or by any so-called emmenagogues, deserves the strongest reprehension. The practice is fraught with life-long danger to the system, and is therefore to be emphatically condemned. Unless it be abandoned, the patient must be prepared for an ultimate increase in the very sufferings from which she thus vainly seeks relief.

Marriage and Amenorrhœa.—A suggestion may here be offered concerning cases in which the menses have been delayed beyond the usual period, and for which marriage has been recommended as a cure. Under certain conditions, this step is sometimes successful, such cases having occurred within the

author's observations. But before such a course is adopted, a professional opinion, carefully formed, should be taken; for should the general health be at fault, as is often the case, or the sexual organs be imperfectly developed, disappointment will inevitably follow.

Suppression of the Menses.

When the menstrual flow has been fairly established as part of the economy, it is yet liable to be suppressed, or to be greatly diminished. It is necessary to distinguish between suppression and retention. The former indicates its arrest from non-secretion of the catamenial fluid; the latter that, although secreted into the uterine cavity, there is some obstruction to its escape.

Causes.—Suppression may arise from a physiological cause, such as pregnancy; frequently, however, it is the consequence of weakness from sedentary, indoor occupations, combined with want of fresh air and sufficient rest; excessive loss of blood; chronic and acute diseases; sexual excesses; and mechanical obstructions: or it may occur suddenly, during the flow, from exposure to cold and damp, such as getting the feet wet, sitting on the ground, eating ices, violent emotions—anger, terror, fright, etc.—or from any other cause which abruptly shocks the system. Suppression for two or three periods, without pregnancy, sometimes occurs after marriage, simply as the consequence of excessive excitement. Wearing thin-soled shoes is a fruitful source of the decay of female beauty, and the decline of female health; injury from tight-lacing, although considerable, being nothing in comparison with that resulting from the fatal habit of wearing thin-soled shoes in all kinds of weather. Many girls are apt to have "a check" from the slightest chill or exposure during the monthly period. Happily, the effects of some at least of these causes may be diminished by the frequency of their occurrence. Habit blunts the system and its functions to many of the injurious impressions to which they are exposed, and women accustomed to bathe may often go into the sea during menstruation with perfect impunity. Sudden suppression during the period often occasions the most acute suffering, and may develop alarming symptoms in the nervous or circulatory systems, or in both; but chronic sup-

pression is far more serious, as it points to a deeper constitutional cause. In Anæmia, Amenorrhœa is a prominent symptom, attended with pain in the back, lassitude, headache, depraved taste, deficient appetite, furred tongue, and constipation. Such cases occur commonly among poor, hard-worked women in the close quarters of towns. We have frequently observed, among the early symptoms of Consumption occurring in girls and women, that there has been at first a scanty menstrual discharge; and that, as the constitutional disease has advanced, the suppression has become complete. In such cases as these, it is most undesirable to attempt to restore the function by any stimulating drugs whatever. The attempt would be vain, and the result disastrous. The suppression of menstruation is not the cause of ill-health, but ill-health is the cause of the suppression, and it is the primary malady that must be attended to. Country air, early hours, and a generous diet will do more than any emmenagogue.

A sea voyage is very apt to occasion in some women suppression of the menses. A very large proportion of the emigrant girls who arrive in New York, after having been on ship-board for some weeks, suffer from Amenorrhœa. Indeed, a sea voyage is sometimes an excellent remedy for excessive menstruation (Menorrhagia).

Treatment.—In most cases of sudden suppression, if attended with pain and febrile symptoms, Aconitum will be the most appropriate remedy to administer, and this in conjunction with a hot sitz-bath will in all probability restore the obstructed flow.

Aconitum.—Sudden suppression from exposure to cold, with weariness and heaviness; heat, thirst, and other febrile symptoms; weight in the loins, and faintness or giddiness on rising from a recumbent posture.

Belladonna.—Rush of blood to the brain, with sparks before the eyes, dizziness, confusion, aching pains in the eyeballs and sockets, shooting pains about the womb and ovaries, bearing-down, with heat and dryness of the vagina.

Bryonia.—Vertigo, bleeding of the nose, stitches in the sides and chest, dry cough, confined bowels, severe pressing pain in the stomach, irritability.

Cimicifuga.—Intense headache, pain in the eyeballs, back, and

limbs, especially of the left side; palpitation, depression of spirits, and nervousness.

Conium. — Retarded or suppressed menstruation of long standing, not depending on constitutional causes, pain or swelling of the ovaries, and white leucorrhœa.

Opium.—Recent cases, with great heaviness of the head, dizziness, lethargy, and drowsiness, especially if there be also obstinate constipation and retention of urine.

Pulsatilla. — Languor, pain across the small-of-the-back and lower part of the bowels, palpitation, nausea and vomiting, sensation of fullness in the head and eyes, and disposition to general coldness; frequent urination, and Leucorrhœa. Especially suitable for females of a mild, timid, and amiable disposition, who are easily excited to tears or to laughter.

Sepia is also an important remedy, and may follow the last medicine, particularly in females of a delicate constitution and sallow skin; the sufferings are often mitigated by exercise and aggravated by rest; bearing-down in the lower part of the abdomen and pains in the loins, melancholic mood, and morning headache.

Administration.—A dose thrice daily at the commencement of the treatment; afterwards, as improvement ensues, morning and night. A remedy may be continued for ten days or a fortnight, if doing good; or earlier changed for a more suitable one, if necessary.

Accessory Means.—The cause of the suppression, and the co-existing impairment of the general health, should be carefully inquired into, and, if possible, removed.

When due to exposure to cold, a hot sitz-bath should be had recourse to at once. If the patient be too ill to take this bath, the lower part of her abdomen should be fomented with flannels wrung out of hot water for half an hour or longer. And in every case all physical or mental depression, undue excitement, night air, late hours, highly seasoned and stimulating food and drink should be avoided. The meals should be taken with regularity, and under pleasant and cheerful influences, the stomach never overloaded, the food simple, nourishing, not too great a variety at one meal, and only such as has been uniformly found easy of

digestion. The drink should be milk-and-water, cocoa, black tea (infused only two minutes) in moderation, and pure water. Green tea, coffee, and other stimulating drinks should be omitted, unless prescribed by a competent authority. A change of air to the seaside or to the country is most advantageous; when this is not practicable, out-of-door exercise, useful employment, and agreeable company or books. In short, every means should be adopted that is calculated to give constitutional vigor. While hoping for a return of the menstrual discharge, the exercise of patience is sometimes necessary, as the general health is often greatly improved before this crowning evidence of cure is obtained. The spinal ice-bag or cold sitz-bath should not be forgotten in suitable cases.

Scanty or Short-lasting Menstruation (*Menstrua exilia*).

Scanty or too brief monthly discharge is only a modification of "Amenorrhœa," and is often due to constitutional causes, and must be treated accordingly. But if the patient enjoys good health notwithstanding the scanty flow, no medicinal interference is necessary. If, on the other hand, sufferings are present during the monthly period, or a general derangement of the system co-exists, medicinal and general means should be adopted to correct the morbid condition.

Treatment.—*Calc.-Phos.*—Cough or hoarseness, with loss of flesh and strength, and other hectic symptoms.

Cyclamen. — Periodical, semilateral headache with dizziness, swollen eyelids, pale face, lips, and gums, chilliness, loss of appetite, and palpitation.

Mercurius.—Scanty menses, with sallow, unhealthy appearance, bilious or liver derangement, or general feebleness, dyspnœa, etc.

Pulsatilla.—Pale, scanty, and watery menses, preceded and accompanied by cutting pains in the loins, dejection of spirits, chilliness, etc., in patients of light complexion and mild disposition. Puls. is most suitable to simple cases.

Sepia. — Patients with torpid skin-action, or a chlorotic appearance, with weariness, sensitiveness to cold, a tendency to sick headaches and Leucorrhœa.

Accessory Treatment. — The accessory measures recom-

mended under the Section which treats of the delay of the first menstruation are in every respect applicable to the treatment of scanty menstruation.

Irregular Menstruation.

Symptoms.—Sometimes the period comes on twice or three times consecutively at the proper times, and then is absent one or more months; or it may occur at one time too early and another time too late.

Causes.—Menstrual irregularities usually depend on defective constitutional vigor; or on bad hygienic conditions or habits, such as close confinement indoors, sedentary occupations, especially if carried on in improperly ventilated rooms, or unrelieved by sufficient outdoor recreation; want of variety in mental and physical employment, etc.

Treatment.—The medicines most suitable for this derangement of menstruation are such as are of efficacy in delay of the first menstruation — namely, Ars., Bry., Calc.-C., Cim., Con., Nux V., Phos., Puls., Senecio, Sep., Sulph., Ver.-A., etc.

Accessory Treatment.—Everything that tends to promote the general health should be sedulously attended to; all mental worry and undue physical exertion should be avoided as much as possible, and the organs concerned in the menstrual function should never be exposed either to extremes of heat or cold. All the accessory measures which we have recommended for delay of the menses are equally applicable to menstrual irregularity.

Vicarious Menstruation.

Sometimes absent or scanty menstruation is accompanied by spitting or even vomiting of blood, bleeding from the nose, Leucorrhœa, or some other periodical discharge, which seems to be substituted for the true menses, and hence is said to be vicarious.

No great anxiety need be excited by these abnormal discharges; but it is very advisable, on account of the alarm and disagreeable sensations which they occasion to the patient and her friends, to take immediate and active steps to check their occurrence, and promote the natural periodic flow.

Treatment.—Bryonia, Ferrum, and Hamamelis, are the most suitable remedies for this trouble.

Bryonia.—Pinching and uneasiness in the abdomen, as if the menses would appear, spitting of blood or bleeding at the nose, stitches in the chest, cough, etc., are indications for this remedy.

Collinsonia. — Vicarious discharge from piles, constipation, weight and itching in the rectum.

Ferrum.—Spitting of blood, pale lips and face, easily flushed, with great debility, vertigo, ringing in the ears, and palpitation.

Hamamelis.—Passive bleeding from nose, stomach, lungs, or bowels; tenderness of, or irritation in the region of the ovaries, and varicose condition of the veins.

Ipecacuanha. — Vomiting of blood, dry cough, difficulty of breathing, frequent sneezing, and headache as if the brain was bruised through all the bones of the head.

Pulsatilla.—Bleeding from the bowels, tendency to diarrhœa, difficulty of breathing at night, loose cough, white leucorrhœa, etc.

Senecio.—Spitting of blood, troublesome loose cough, diarrhœa, chronic nasal discharge, and sleeplessness.

Accessory Treatment.—The accessory measures are similar to those recommended in the preceding Sections, especially in that Section treating of suppression of the menses.

Profuse Menstruation (*Menorrhagia*).

Definition. — The term "Menorrhagia" literally means the bursting forth or immoderate flow of the catamenia; the quantity of blood lost during the period being excessive, or the menstrual period prolonged, or of too frequent recurrence. In many cases all these conditions are present; the discharge is excessive, too prolonged, and returns too early. Menorrhagia is most common about the time of the final cessation of the menses, probably from temporary congestion of the uterus, and probably also of the ovaries, especially in those who have had many children, or abortions. It is of great importance, both on account of its comparatively frequent occurrence, and the serious consequences which follow it. It should be remembered, however, that it is not a disease of itself, but only a symptom of a disordered state of the constitution, or of the organs of generation.

It is difficult to determine, except approximately, the quantity of discharge that should occur at each monthly period; but it varies considerably according to constitution, temperament, habits, and climate. Robust, plethoric females, who eat abundantly, and drink wine, can bear a comparatively large discharge without inconvenience, whilst delicate patients, of relaxed constitution, would quickly suffer seriously from excessive discharges. The monthly loss, however, should never be such as to occasion debility and general ill-health. There is a deep-rooted and most dangerous notion current, that, however great the discharge may be, if it occur regularly, it is in perfect accordance with the economy of nature. When a medical man directs a parent's attention to the debility and ill-health following an habitually too copious flow, he frequently receives the answer, "She is always so." The fact of a girl being always so is the very reason for adopting such measures as may, if possible, prevent her ever being so.

Causes.—These may be local or general. Local causes of Menorrhagia are numerous, of which the following are a few:—chronic congestion, inflammation, or hypertrophy of the uterus or its cervix, or of the ovaries; a granular condition of the mucous membrane lining the cavity of the uterus; subinvolution or inversion of the uterus; polypi; tumors; retention of a portion of the placenta or of the fœtal membranes; malignant or other diseases of the womb, etc.

Too frequent sexual indulgence is another cause; this tends to profuse menstruation by producing irritation and over-excitation of the womb and its appendages.

General causes are—acute and chronic disease; severe inflammatory affections; tubercular deposits; and Nephritis or disease of the kidneys. The last is an important cause; and in persistent cases of Menorrhagia, especially with œdematous ankles and eyelids, the urine should be examined for albumen. In Tuberculosis, Menorrhagia is most likely to occur in advanced stages of the disease, and in those who have previously borne children. In renal mischief, the blood, being deprived of its albumen, readily exudes through the walls of the capillaries. Other general causes are—residence in a tropical or malarious climate, debility from

prolonged nursing (a very common cause), long-continued mental trouble, too confined or unhealthy occupation, luxurious living, chronic indigestion, hepatic congestion, disease of the heart, etc. The above and kindred conditions may cause profuse menstruation by giving rise to a congested state of the womb and adjacent organs, and by causing a morbid condition of the blood. Regular excessive monthly discharge, profuseness being the only point complained of, points to some grave constitutional cachexia as the cause. All such cases should be under the best professional care, so that, if possible, the systemic fault may be corrected.

It is by no means unusual for a case of Dysmenorrhœa to merge into one of profuse Menstruation. When the period arrives, the flow is retained for some hours with great suffering. Finally, the spasm, or obstruction, is removed, and the discharge becomes excessive, or hæmorrhagic (*Ludlam*).

Treatment.—*Arnica.*—This medicine should prove useful when the discharge is the result of a fall or blow.

Arsenicum.—Bloody or leucorrhœal discharge after the cessation of the periods, resulting from chronic inflammation of the uterus. Is seldom indicated during the continuance of the menstrual flow.

Calcarea Carb.—Profuse menstruation occurring too early, in scrofulous patients, with a tendency to corpulency, and troubled with itching, burning leucorrhœa. Is used during the intermenstrual period only.

China.—Irregular hemorrhage, the blood being dark and thick, flowing too long, with burning at the top of the head, buzzing in the ears, debility, faintness, etc. Employed chiefly between the catamenial periods.

Crocus.—Dark-colored clotted blood, too frequent and abundant discharge, painful menstruation, yellowish color of the face, a feeling as if there was gauze before the eyes. It is given during the flow only.

Ferrum.—Menstruation too frequent, too profuse, and lasting too long in weakly persons with flushed faces, the blood being sometimes thin and pale, and at other times thick and dark. Is usually given between the periods.

Hamamelis.—Excessive discharge of darkish blood, especially

when arising from undue ovarian excitement. This medicine may be administered both during the flow and afterward.

Ipecacuanha.—May be given during the discharge when it is of a bright red color, and there is a tendency to nausea and difficulty of breathing, with great pressure in the region of the womb.

Platina.—This medicine is of great service in cases due to much ovarian excitement, the discharge consisting of dark, thick, uncoagulated blood, with pressive pains from the back to the groins, and great sensitiveness. It is of more efficacy when given between than during the menstrual periods.

Phosphorus.—In the inter-menstrual times in patients having a consumptive tendency, with much mental and sexual excitement, this medicine may be administered with advantage.

Pulsatilla is sometimes of great use when the blood is thick and black, or pale and watery, especially at the critical age. Headache, sadness, and melancholy, and shifting pains in the back and abdomen, are indications for the employment of this remedy. It may be used both during and after the cessation of the discharge.

Sabina.—Paroxysmal discharges of bright-red blood, with bearing-down pains in the lower part of the abdomen, especially in women who have had frequent abortions, or who are approaching the climacteric period. It is eminently useful during the flow but in many cases it is advantageously administered in the intervals as well, especially in cases in which there is irritation of the bladder or rectum.

Secale.—This is a valuable agent in hemorrhage from the uterus, occurring in weak, cachectic, and exhausted women, with cold extremities, pale face, and small pulse, especially in women whose systems have been debilitated by a long residence in hot climates. Like Sabina, it may be given both during and after the discharge.

Sulphur.—This medicine is sometimes useful when given in the inter-menstrual periods to patients with unhealthy skins and scrofulous symptoms, the blood being black and clotted.

Other Medicines that May be Sometimes Required.—Acon. and Bell. The former when there is severe congestive headache, flushed face, throbbing temples, confusion, sensitiveness

to light and sound, etc.; and the latter when there is feverishness, palpitation, throbbing in the uterus, etc.

Administration.—When the discharge amounts to flooding, the dose should be repeated every ten, fifteen, or twenty minutes, until flooding ceases. In less urgent cases, every two, three, or four hours, as long as necessary.

Accessory Treatment.—The patient should spare herself, and maintain the recumbent posture a good deal for a few days before, and especially during the discharge; household duties, particularly lifting, or reaching anything high, should be avoided; also warm beverages, even of black tea, and excessive eating and the use of stimulating food and beverages. Cold water is the most suitable drink; injections of cold, or even iced water up the bowel are useful, especially if the patient is costive or troubled with piles; cool vaginal injections, with a female syringe, or the application of hot-water spinal bags to the small-of-the-back for half an hour at a time, tend to relieve a congested state of the womb. In very severe cases, cold wet cloths suddenly applied over the abdomen so as to produce a shock, light covering, and the horizontal posture, are absolutely necessary; the hips should be as high or higher than the shoulders, so as to relieve the uterus of the column of blood, and the patient be kept cool, quiet, and free from excitement. So long as the tendency to Menorrhagia continues every kind of excitement should be restricted or avoided altogether.

Plugging the Vagina.—Sometimes it may be necessary to plug the vagina. A sponge or handkerchief will do; but common cotton wadding, with the backing on it, makes the best plug. Whatever is used should be freely smeared with glycerine, and have attached to it a piece of tape or twine to facilitate removal. Care should be taken to fill up and distend the vagina with the plug, otherwise the object of using it will be defeated by the oozing out of the blood at the sides. The plug should not remain more than twenty-four hours; if necessary it may be replaced by another. See also "Accessory Means" under "Flooding after Labor."

Preventive Measures.—If an impoverished state of the blood is the cause of profuse menstruation, the defect must be remedied by nutritious and unstimulating diet, pure air, out-of-door exer-

cise, etc. Residence in a tropical climate, or in a malarious or unhealthy locality, must be changed. An elevated place, sheltered from the northeast winds, on a sandy or chalky soil, is of great importance. Severe and persistent cases are much benefitted by a temporary residence on the coast. Sea-bathing and the sponge-bath, taken under favorable conditions, followed by good friction for several minutes by means of a bath-sheet or large towel, are of great service by correcting the defective activity of the cutaneous surface which so often co-exists with Menorrhagia. The cold sitz-bath is specially valuable; the water should be sufficient to cover the pelvis, while the feet and legs should be covered with hot flannel, placed against a foot-warmer, or immersed in a foot-pan of hot water. The exact temperature of the bath (55 deg. to 65 deg.), and the length of time the patient should sit in it (five to fifteen minutes), should be modified by the season of the year. The bath should be taken at bed-time, and on leaving it the patient should be dried quickly, and immediately retire to bed. Weakly patients should have assistance in their ablutions. Worry and domestic cares should, as far as possible, be avoided; the influence of these causes is very potent, and if not removed or greatly modified may neutralize all our best-directed efforts.

Painful Menstruation –Menstrual Colic (*Dysmenorrhœa*).

Definition.—The term Dysmenorrhœa is used to designate the condition in which menstruation is performed with difficulty and pain. The pain, the essential element, is of various degrees of intensity, and, like all uterine and ovarian pain, is chiefly felt at the bottom of the back and within the lower part of the abdomen. The menstrual discharge is generally scanty and imperfect; it may, however, be profuse, or in some cases the function may otherwise be healthily performed.

Varieties.—Several forms of Dysmenorrhœa have been described. (1) The inflammatory or congestive form occurs in plethoric patients of strong passions, who are fond of the pleasures of the table and of the gayeties of life; it is accompanied by the discharge of flocks of fibrine and false membranes from the interior of the uterus. This has been called membranous

Dysmenorrhœa, hypertrophied portions of the mucous lining of the uterus being discharged. In this form the pain is greater on the left side, shooting along the edge of the false ribs, up to the shoulder, then down to the ovary. "This is the most intractable and troublesome form of the disease. In a large majority of cases it follows abortion. Most women who have it have had an abortion in the early months or years of their married life, either accidental or induced. When this abortion took place, the lining membrane of the womb was peeled off, or exfoliated, and subsequently, with each return of the menses, a similar loss of this structure is sustained. The altered membrane may come away as a complete cast of the uterine cavity, but is usually thrown off in strings or shreds. Besides being a very painful form of the complaint, the woman sometimes suffering as much as in real labor to get rid of these shreds or casts, it almost always results in barrenness. In many cases abortion depends upon this disposition of the lining membrane of the womb to detach itself at stated periods." (*Ludlam.*) (2) Neuralgic Dysmenorrhœa, which occurs in the feeble and anæmic, as after nursing, flooding, prolonged diarrhœa, etc. This variety occurs in delicate girls of feeble constitution, or in women of full habit but inactive life, or in those who are poorly fed and overworked. The flow is scanty, the pain paroxysmal, but not entirely absent, less when warm, aggravated by cold. (3) Spasmodic Dysmenorrhœa, from indigestion, nervous irritability, exhaustion, etc. In this form the suffering is in the back and in the lower portion of the abdomen. (4) Obstructive or congenital Dysmenorrhœa, in which the pain is caused by the excessive flexure or insufficient calibre of the canal or passage which should convey the blood from the womb, producing partial and temporary retention of the menses. This variety also includes mechanical Dysmenorrhœa from Polypi, Cancer, fibroid or other tumors of the womb, which compress or distort the canal, or otherwise impede the exit of the menstrual fluid. The phenomenon may be thus explained to the non-medical reader:—Naturally the cavity of the unimpregnated healthy womb will only contain a very small quantity of fluid, and as soon as the menstrual blood accumulates, unless it finds free exit, it will distend the uterus, and thus give rise to pain, greater or

less according to the sensibility of the patient and the amount of resistance.

Symptoms.—Severe bearing-down pains in the uterine region, resembling the pains of labor, and occurring in paroxysms; aching in the small-of-the-back, loins, pelvis, and sometimes extending to the limbs; headache, flushed cheeks, hurried breathing, palpitation; cutting and pressing pains in the abdomen. The pain often increases in severity as the period approaches, becoming so intense that the patient cannot move about, but is compelled to lie down, and even roll about in agony. The pain sometimes precedes the flow several hours, or even days, and continues for a longer or shorter period, and may cease or continue when the discharge is established. At other times the pain continues till a membranous substance is expelled, when a healthy discharge may take place, or it may entirely cease. In some cases, the breasts, the counterparts of the female generative organs, become extremely sensitive and painful. Patients subject to Dysmenorrhœa are generally troubled with confined bowels, frequent headaches, from congestion in the inter-monthly period, and are often sterile from abortion which occurs at the menstrual cycle.

Causes.—These are in part explained under "Varieties," and are chiefly as follows:—A congested condition of the secretory vessels of the uterus, disease of the ovaries, inveterate constipation, and a contracted canal of the neck of the womb. In obstinate constipation, the rectum may become so distended with impacted fæcal matter, as by its pressure on the neck of the womb to render the escape of the menstrual fluid difficult and painful. Ovarian irritation, which is sometimes induced by undue sexual excitement, is not an infrequent cause. Persons of a neuralgic, hysteric, or rheumatic tendency, generally suffer much pain at the menstrual period. Improper habits, the pressure of stays, and the dragging of skirts on the abdomen, are also causes of this disorder.

Treatment.—*Aconitum.*—In cases due to inflammation or congestion of the uterus or ovaries, especially if attended with febrile symptoms.

Arnica.—Is applicable to all cases traceable to a fall or blow.

Arsenicum.—Neuralgia, pain, burning, restlessness, prostration,

chronic inflammation of the uterus, corrosive leucorrhœa. Is of more service in removing the causes of the pain than of palliating it.

Belladonna.—Congestive enlargement of the uterus or ovaries, bearing-down pains and heat in the vagina, especially in stout persons with turgid countenances.

Borax.—Membranous Dysmenorrhœa, menses usually too early and variable in quantity.

Bryonia.—In congestive and rheumatic cases, greatly aggravated by movement, and relieved by the application of warmth.

Calcarea C.—Dysmenorrhœa occurring in delicate, scrofulous patients, the pain being of an aching, burning character, and accompanied with griping pain in the back and bowels.

Caulophyllum.—Dysmenorrhœa with a normal discharge. The testimony to the value of this remedy for Dysmenorrhœa is very strong; it may be given as a palliative during the menses, and as a curative agent during the intervals. In the former case, it should be administered every two to four hours, and in the latter, twice daily. The action of Caul. has been compared to that of Secale, but with this difference, that it influences the neck as well as the body of the womb.

Chamomilla. — Severe labor-like pains; pressure from the small-of-the-back forwards and downwards; colic, with sensitiveness to the touch; dark clotted discharge; especially suited to nervous, irritable, and bilious patients.

Cimicifuga.—Rheumatic or Neuralgic Dysmenorrhagia, with severe headache, aching of the limbs, dark and coagulated discharge, pain under the left breast, depression of spirits, etc. This drug or its concentrated preparation—*Macrotin*—is most useful in the inter-menstrual periods.

Collinsonia.—Dysmenorrhœa with pelvic congestion—Constipation, Piles, etc. Membranous Dysmenorrhœa.

Gelsemium.—This remedy is chiefly valuable for Spasmodic Dysmenorrhœa, as a palliative during the period, rather than as a curative agent.

Hamamelis.—Ovarian Dysmenorrhœa, with severe pain in the groins, profuse Leucorrhœa, irregular menses, extreme pain and soreness, smarting pain on passing water, and frequent urging.

Nux Vomica.—Griping and digging pains, with discharge of clots, menses appearing too early, and scanty, burning heat in the vagina, constipation and irritation of the bladder; is especially called for in women with dark complexion.

Pulsatilla.—Scanty menses, the discharge being attended with cutting pains in the region of the womb, abdomen, back, and loins, with loss of appetite, chilliness, vertigo, etc., the pains moving from one part to another. This remedy is specially suited to young women of light hair and complexion, mild disposition, and to uncomplicated cases.

Sabina.—Violent pain extending from the back through to the pubis, stitches in the vagina, especially in plethoric women whose menses are habitually profuse.

Secale.—Expulsive forcing-pains, followed by dark discharge, often in small lumps, cutting pains in the bladder or bowel, pale face, cold sweat, flagging pulse, etc. Sometimes the agonizing forcing-pains occur without any discharge. We have met with striking results from the administration of this remedy in cases presenting the above symptoms.

Senecio.—Functional Dysmenorrhœa, with scanty discharge. It gives the most marked relief if administered during the inter-menstrual period, for at least ten days preceding the catamenial discharge.

Viburnum Opulus.—Spasmodic Dysmenorrhœa, thrice daily for a week previous to the expected period; every hour when the pain sets in; every quarter of an hour if it be very severe.

Xanthoxylum.—Neuralgic Dysmenorrhœa, especially in females of spare habit, nervous temperament, and delicate organization.

Administration.—In acute cases, a dose every one, two, or three hours; as improvement takes place, or in chronic cases, a dose every six, eight, or twelve hours.

Accessory Measures.—Attention must be directed to those general rules for the recovery of health which are prominently dwelt upon in this book, and form the basis of the correct treatment of disease of every nature. Daily active exercise in the open air; regular and early hours; plain, wholesome diet; abstinence from wine, coffee, and green tea; and the avoidance of

influences that disturb the mind and temper, are important accessories in the treatment. During the intervals of menstruation, the morning cold bath should be used; or the lower parts of the back and abdomen may be sponged for three minutes with water at 100 deg., and then for one minute with cold water, both morning and night; during the periods, the morning bath should be tepid; in any case vigorous friction should follow. In some cases of Dysmenorrhœa, with scanty and tardy discharge, the spinal ice-bag has been found very useful; it should be used for half an hour once or twice a day. In the congestive form of Dysmenorrhœa, the vaginal douche, recommended in the Section on "Leucorrhœa," may be used once or twice a day in the intermenstrual periods with great advantage. All sexual excitement must be avoided for two or three days at least preceding the appearance of each menstrual period, and every unnatural habit that may have been insidiously acquired must be utterly abandoned. As palliatives during the period, hot bottles, or flannels wrung out of hot water, and applied to the lower part of the abdomen, or warm hip-baths, in which the patient may remain for twenty or thirty minutes, or an enema of as hot water as the patient can comfortably bear, generally give effectual relief to the distressing aching and weariness that at times accompany the monthly function. Rest, both just before and during the period, is also an important adjunct. Attention must be given to the dress. No proximate cause is so potent as the pressure of stays and skirt strings, and the dragging weight of skirts on the abdomen. By these means the uterus is displaced, and the spine is weakened.

Cessation of the Menses—Change of Life—Critical Age—Climacteric Period.

The cessation of the menses commonly occurs in this country between the fortieth and fiftieth years, generally about the forty-fifth; but, like the first appearance, its termination varies in different women, and is in subordination to the temperament, constitution, climate, and habits of the individual. There is usually some relation between the periods of the first and last menstruation, for the cessation occurs at a late period when the first appearance was delayed.

Menstrual life continues for about thirty years in the case of healthy women, varying as above. Thus, if menstruation began at the age of fifteen, the critical period will arrive at about forty-five; or if at twelve, menstruation will cease at forty-two. In some families, however, the change comes as early as thirty-five or forty, and in others not until fifty or later.

Symptoms. — Whilst the change is in progress, there is commonly more or less functional disturbance of the general health, the nervous system especially manifesting various perturbations, such as vertigo; syncope; headache; flushes of heat; urinary difficulties; pains in the back, extending down the thighs with creeping sensations, heat in the lower part of the abdomen, occasional swelling of the extremities, itching of the private parts, mental irritability, restlessness, culminating sometimes, especially in patients of a decided nervous temperament, in more profound nervous disorder. In these nervous symptoms there is commonly more or less periodicity; and when the "turn of life" is fully past in favorable cases these disorders subside or take on new forms.

Sometimes menstruation ceases abruptly. The monthly period may be arrested by cold, fright, or some illness. Earlier in life, the suppression would have been followed by a return of menstruation, after the removal of the cause; but now nature adopts this opportunity to terminate the function. Gradual termination is, however, the more frequent, and is attended with the least disturbance of health. In gradual extinction, one period is missed, and then there is a return; a longer time elapses, and there is, perhaps, an excessive flow; afterwards some months may pass away without any reappearance; then there may be a scanty discharge, followed, perhaps, by flooding, and at last the discharge becomes so scanty and so slightly colored as scarcely to attract notice, and then finally disappears (*Ashwell*). The reproductive powers cease with the termination of the function.

At this critical period there is not infrequently enlargement of the abdomen, which, though it may occur at earlier periods of life, is due to causes peculiar to this. It may arise from a highly sensitive and enfeebled state of the stomach consequent on sympathy with the deranged functions of the womb. Hence there is Indigestion, which does not prove amenable to ordinary remedies,

but must be treated in view of the primary cause. Food and flatus accumulate, causing painful distention of the abdomen, and attended with loss of appetite, depression of spirits, constipation, drowsiness, and general weakness. Scanty or excessive discharge is also an accompaniment. Fibrous tumors of the womb are not uncommon, and by their mechanical pressure may cause painful defecation, Constipation, Piles, Diarrhœa, frequent and painful urination, varicose veins, and Œdema. Passive congestion, or enlargement of the womb, often found in those whose occupations require much standing, causes floodings and debility. These disorders are attendant on the enlargement of the abdomen which is so frequently observed at this period.

The general opinion that the change of life is a perilous period for patients who enter it in a state of disease is, we believe, correct; more especially if any uterine or constitutional affection exists, for this is generally aggravated, the change prolonged, and the cessation retarded.

Causes of Disordered Function.—Previous uterine disease; exhausting labors; anxieties arising from the rearing of a family, etc.; these trials tend to depress the forces, so that when the final efforts which close the sexual life have to be made, the nervous system gives way in one shape or another, and various aberrations ensue. The consequences are, an irregular distribution of the blood, and an alteration of its character. In the absence of the previous normal attraction or afflux of blood to the uterus and pelvic viscera generally, the patient becomes liable to irregular determinations of blood, especially to the head. The old notion that menstruation acts as a purifying process is no doubt, to some extent, correct; hence, when this function ceases the blood is liable to become charged with deleterious products. This is further liable to be aggravated by the fact that at the "change" the nervous distribution is reversed, and indigestion results from disordered or obstructed secretion, or excretion. Too little open-air exercise intensifies the evil by favoring torpor of the chief depurating organs,—the lungs, the intestinal canal, the liver, the kidneys, and the skin. These, acting imperfectly, permit the products of effete tissues, and of mal-assimilated food, to accumulate in the circulatory fluid.

Treatment.—[Aconite is an invaluable remedy for disturbances in the circulation at this time.]

Bryonia.—Congestion of the lungs or chest; sense as of a stone lying in the stomach; suppression of the menses with bleeding at the nose; pain in the limbs and small-of-the-back.

China.—Is most useful when great debility has resulted from excessive loss of blood; also when there is a feeling as if the head was opening and shutting.

Cimicifuga.—Many of the sufferings incidental to the critical age are under the control of this remedy, especially the following:—pains under the left breast and in various parts of the left side; sinking at the stomach; headache, with aching in the eyeballs and limbs; depression of spirits, even to melancholy; irritability and restlessness.

Cocculus.—Spasms or colic-like pains in the abdomen, with nausea and vomiting; giddiness and headache; painful menstruation, with discharge of coagulated blood.

Ferrum.—For symptoms similar to those calling for China, especially if there be any tendency to œdema of the ankles, eyelids, etc.

Glonoine.—Rush of blood to the head, with throbbing and noises in the head or ears; giddiness.

Lachesis.—This remedy is recommended as a most valuable one for flushes, burning pains at the top of the head, sleeplessness, pains in the back, and other troubles common at the change.

Pulsatilla.—General dyspeptic symptoms, nausea, or vomiting, distention after a meal, pains in the left side, associated with irregular period, etc. It is especially suited for women of the temperament and complexion previously indicated.

Sulphur.—Indigestion, Piles, itching and burning in the sexual organs, Leucorrhœa, and sweats, and flushings of climacteric women; also in constitutions marked by a morbid activity of the skin.

Tabacum.—Sense of wretchedness; sinking feeling at the stomach; nausea; palpitation; sensation of coldness; great muscular debility. These symptoms are often promptly met by Tabac., whether they occur at the change or during the monthly period.

Accessory Means.—A light and nourishing, but not an extra

diet, should be allowed; wine and malt liquors are generally unsuitable; for an accustomed discharge is about to cease, or has already ceased, and the system is liable to oppression, and the patients to complaints of weakness; but this weakness is generally sensational rather than real. If, to remove the languor and inactivity present, stimulants and generous diet be allowed, some important organs will most likely suffer. [It is better to take a smaller allowance of food than formerly; only just so much as can be easily digested. The unpleasant distention of the abdomen, which most women suffer from at this time, may be much lessened by an almost abstemious diet. No doubt the permanent excessive enlargement of the abdomen is due to the long-continued pressure of gases in the bowels.] Small quantities of spirits are sometimes prescribed to remove the distressing sensations commonly felt at this period, and are generally taken by the patient with great satisfaction; but their good effects are only temporary, while their continued use is often most mischievous. Veal, pork, salt meat, pastry, and made dishes should be avoided; but vegetables in season, well cooked, with beef, mutton, white fish, or fresh game may be taken in moderation. Cocoa, or cold water, forms the best drink for breakfast, and one or two small cups of tea, not infused beyond about two minutes, for the evening meal. The sleeping-room should be cool and well ventilated, and the patient should sleep on a mattress. The changes of the weather should be guarded against by appropriate dress, and exercise taken daily in the open air.

When the function of menstruation ceases or becomes irregular, we have seen that the perturbed nervous system induces disordered digestion, and the balance between secretion and excretion becomes lost; and unless the lungs, the digestive organs, the kidneys, and the skin are maintained in efficient action, the various products which ought to be elminated are retained, and greatly or even seriously embarrass the whole animal economy.

CHAPTER II.

INCIDENTAL DISEASES.

Leucorrhœa—Whites.

Definition.—The term Leucorrhœa literally means a white discharge—the white as opposed to a red sanguineous one,—though it is not unfrequently of a light cream color, or yellow, or greenish,—and includes a great variety of non-hemorrhagic discharges. It is a catarrh of the vagina, cervix, or uterus, the result of inflammation or irritation. In a healthy condition, the mucous lining, and the various glands which stud the vaginal orifice, secrete a fluid just sufficient to lubricate the opposed surfaces, and for other physiological purposes. In unhealthy conditions, this secretion becomes increased in quantity, of an altered character, and varies in color and consistence; this is termed Leucorrhœa.

This disease or symptom may occur at any period of life, but is most common after puberty, and previously to the cessation of the menses, when so many causes are in operation to induce free determination of blood to the utero-genital organs.

It has been observed that leucorrhœal discharge in the mother is a potent cause of scrofula in the child. The fœtus is insufficiently nourished, hence the scrofulous symptoms soon show themselves in the form of Convulsions, Hydrocephalus, or mesenteric disease; or, if the age of puberty be reached, in Tubercula.

Symptoms.—Generally, a profuse mucous discharge from the utero-vaginal lining membranes, of a white, cream, yellow, or greenish color; thin and watery, or of the consistency of starch or gelatine; it may present a curdled appearance, or appear as a thick, tenacious, glairy secretion; and it may be inodorous or fœtid. When the discharge proceeds from the vagina it is

generally a light, creamy-looking fluid, and has an acid reaction; when it is the effect of ulceration of the *os uteri*, it is profuse and semi-purulent. That poured out by the cervical glands is a copious, tenacious albuminous fluid, very much like the white of egg, and so distinctive that it is unmistakably connected with disease of the cervical canal. It blocks up the *os uteri*, and hangs out of it as a string of viscid mucus which cannot be wholly removed. This form of Leucorrhœa prevents conception. The discharge proceeding from the lining of the interior of the uterus has an alkaline reaction, is copious, and generally immediately precedes menstruation. But in most cases the discharge is much more profuse immediately after the menstrual period. In severe cases, the whole system becomes injuriously affected; the face is pale or sallow; the functions of digestion are impaired; there are dull pains in the loins and abdomen; cold extremities; palpitation and dyspnœa after exertion; debility and loss of energy; partial or entire suppression of the menstrual flow. Sometimes the discharge is evidently vicarious of menstruation. Slight cases of Leucorrhœa may exist for years without giving rise to any very marked symptoms.

Causes.—These may be constitutional or local. Any habit or disorder which debilitates the constitution or lowers the tone of health is likely to be accompanied, sooner or later, by a leucorrhœal discharge; thus it is frequently associated with profuse menstruation, prolonged lactation, and other excessive discharges; prolapsus uteri. It is often met with in delicate females of a leuco-phlegmatic temperament, in whom a tendency to Phthisis exists; indeed, it is not infrequently the precursor, if not the cause, of lung disease. Cold; congestion; scrofulous constitution; defective health generally; a warm climate; the use of purgative drugs; an inactive and luxurious life, etc. In short, Leucorrhœa is likely to accompany or follow any disease that enfeebles the health. Leucorrhœa is very common in the rich, indolent, luxurious, and dissipated, and in those who live in crowded cities; it is less frequent in those of industrious and regular habits, and in persons living in the country, especially if the soil be dry.

Local causes are—excessive intercourse, and similar causes of sexual irritation; Polypi, little vascular mucous tumors, or other

abnormal growths of the uterus; want of cleanliness, etc. Lastly, Leucorrhœa not infrequently results from irritation or disease in an adjacent part, — thread-worms in the rectum (especially in children), Piles, Stone, or Catarrh of the bladder, or the introduction of any irritating substance into the vaginal passage.

Treatment.—*Arsenicum.*—Thin, burning Leucorrhœa, from passive or atonic hyperæmia of the uterus, with too frequent and profuse Menstruation.

Calcarea Carb. — Chronic Leucorrhœa in children and in women of weak, scrofulous, and lymphatic constitution, particularly those who menstruate too frequently and too profusely; the Leucorrhœa has a milky appearance, is worse just before the menses, is often attended with itching or burning, or with pains shooting through the parts, and sometimes falling of the womb.

China.—After long-continued or excessive discharges, for the consequent debility; also after other debilitating diseases which have induced Leucorrhœa.

Hamamelis.—Moderate or excessive discharge, more or less taking the place of menstruation, with much pain about the groin, scalding urine, etc.

Helonias.—Leucorrhœa with relaxation of the womb and its appendages. It improves the tone of the sexual organs, and at the same time corrects the co-existing general debility.

Hydrastis.— Leucorrhœa with abrasion or superficial ulceration of the parts, and co-existing indigestion and debility. It should be used locally also, six drops of the extract to an ounce of water.

Iodium. — In constitutions similar to those mentioned under Calc.-Carb., when there is an offensive, thin discharge; with emaciation.

Mercurius.—Leucorrhœa of a yellowish character, containing matter (pus), with soreness and itching; profuse menstruation, the discharge being thin and unhealthy-looking; weakness, coldness, sallow complexion, etc.

Pulsatilla.—Suitable in the majority of cases, especially when occurring in girls who have not menstruated, or in Leucorrhœa during pregnancy, when the discharge is a thick white mucus, or is corrosive, with itching, etc. Wandering pains in the abdomen, flatulence, and the Pulsatilla temperament are further indications.

Sepia.—Yellow, greenish, or fœtid discharge, worse before the menses; scanty menstruation; bearing-down pains; costiveness; sensitiveness to cold; languor; delicate, unhealthy skin.

Sulphur.—Chronic cases and scrofulous constitutions. It may follow, or be given in alternation with, any one of the above remedies; in the latter case, Sulph. for seven or ten days, and the other remedy selected the next seven or ten days, and continue to repeat as long as necessary.

Xanthoxylum.—Leucorrhœa with Amenorrhœa, or Dysmenorrhœa, especially in nervous persons, of a delicate organization.

Additional Remedies.—Cocc. (leucorrhœa, with colic and flatulent distention); Collin. (with piles or constipation); Stannum (watery leucorrhæa in feeble patients).

Administration.—A dose three or four times daily, for a week or ten days; in chronic cases, morning and night, for a longer period.

Accessory Means.—There are several conditions which are absolutely essential to the successful treatment of "Whites," the most important of which are the following:—Rest, in the horizontal posture, is sometimes necessary in the treatment of this, as it is of most other uterine disorders. Active exercise aggravates an existing Leucorrhœa, just as it does congestion, or inflammation of the womb. At the same time, moderate exercise in the open air, especially in the intervals between the attacks, short of inducing fatigue, is essential for the maintenance of the general health. Other accessories of importance are—a diet chosen with the view to its nourishing properties, and to its ready assimilation; avoidance of all sexual excesses, indulgence in the pleasures of the table, exciting spectacles, crowded balls and parties, etc.; and, lastly, frequent injections of water, and daily ablutions, including the hip-bath, are necessary, in order to insure the most perfect cleanliness of the utero-genital organs.

The importance of this last point cannot be too strongly stated, for without a due attention to cleanliness all other efforts may prove futile. The leucorrhœal secretion is at best exceedingly irritating, but when it is permitted to accumulate and remain for a long time in contact with the mucus membrane, it becomes partially decomposed, fœtid, and highly pernicious to the healthy

condition of the parts. On this account the frequent and thorough use of local applications of tepid or cool water should be strictly carried out. The use of the enema syringe, having the vaginal tube attached, is necessary efficiently to carry out this part of the treatment. For delicate ladies we recommend—

The Vaginal or Uterine Douche.—In order to insure a continuous stream of water on the lower portion of the womb, and on the vaginal mucous surfaces, without any manual effort on the part of the patient [the Fountain Syringe should be used].

Infantile Leucorrhœa.

Definition.—Catarrhal inflammation of the vulva, occurring chiefly in strumous children.

Symptoms.—Irritation of the vulva, occasioning a frequent desire to rub the part, sometimes slight pain in passing water, and a thin, colorless, or thick, creamy discharge. In unhealthy children, of bad hygienic conditions, the Leucorrhœa may become copious and corrosive, giving rise to ulceration of the mucous membrane. The discharge is infectious, causing severe inflammation if brought in contact with the lining of the eye, or other mucous surface.

Causes.—Sudden check of perspiration or exposure to cold; acrid urine; neglect of cleanliness; the use of infected sponges; worms; manual irritation, etc.

Diagnosis.—Girls of all ages are liable to a discharge from the vulva, quite independently of infectious matter. The remembrance of this fact may save much distress; for the occurrence of this discharge in children has often caused unfounded suspicions and anxiety.

But the absence of swelling, heat, and redness; the limitation of the discharge to the external parts, and the integrity of the hymen, tend to prove that the affection has not been communicated. In infectious discharges, the parts are inflamed and swollen, the inflammation extending high up into the vagina, and passing of urine causes pain.

Treatment.—*Calcarea C.*—Chronic whites in strumous children, the discharge being milky.

Cannabis Sativa.—When the discharge is yellowish, and

there is swelling, heat, and redness of the parts, and painful urination.

Mercurius Cor. — Acrid yellowish discharge with soreness, scalding, scalding urine, etc.

Pulsatilla.—Milky discharge in children of fair complexion, with symptoms of indigestion or catarrh.

For additional remedies, and fuller details of symptoms, the previous Section should be consulted.

Accessory Measures.—The parts should be frequently washed with tepid or cool soft water, carefully dried, and a little finely-powdered starch or violet-powder applied. The diet should be good and digestible, taken regularly in three meals daily, and properly varied. Fresh air is necessary, but without too much exercise at first. Salt baths, sea-air, and cod-liver oil are often advantageous, and in strumous children essential; for the general health, which is at fault, must be corrected before a cure can be effected.

Chlorosis—Green Sickness.

Definition.—A condition of general debility affecting young women at about the age of puberty (from sixteen to twenty-five years of age), due probably to nervous causes. There is anæmia or deficiency of the red corpuscles of the blood, which gives the skin a pale, yellowish, or greenish, and almost transparent hue. The greenish hue is so characteristic as to have given rise to the name—"green-sickness." The temperature of the body is diminished, and morbidly sensitive to cold. There is generally delayed, suppressed, or imperfectly-performed menstruation. Respiration, circulation, and digestion are also disturbed; and the whole organism, physical and mental, is feeble and enervated.

Symptoms.—In addition to those given in the preceding paragraph, the following symptoms are always more or less prominent:—loss of appetite, the patient often subsisting upon an incredibly small quantity of food; or the appetite is perverted, and such articles craved for as chalk, fitful, or the patient eats simply as a duty. Most patients complain of obstinate constipation, or this condition may be alternated with relaxation. Sometimes the breath is offensive, or there may be ulceration of the stomach, and persistent vomiting, or even Hæmatemesis. These

and other gastric disturbances are attended by loss of the cellular tissues, and even wasting of the muscles.

The face becomes puffy, and the features somewhat obscured; the eyes languish, the lids are œdematous, and surrounded by dark circles, which strongly contrast with the pearly, translucent appearance of the white-of-the-eyes, and the pallor of the lips. A species of dropsy, most generally affecting the ankles, is often present, and the whole surface is dry and bloodless. The hands are shrivelled, and the nails brittle. Nervous affections of the heart, unattended by any structural change, are very common, with palpitation, chilly turns, with cold and often œdematous extremities. The pulse is usually, but not invariably, slower, and also weaker than in health. But the most marked symptom affecting the circulation is the *anæmic bruit* or *bruit de diable;* this is a continuous humming or cooing sound heard over the præcordial region, and especially over the large blood-vessels of the neck. It can also be felt, and under the finger resembles the vibrations of a musical cord. It is supposed to be due to the tenuity of the blood.

It is very rare for Chlorosis to exist without menstrual irregularities; Amenorrhœa is the most common complication. Sometimes the monthly discharge, if it ever occurred, is superseded by a copious Leucorrhœa. The co-existence of non-menstruation and gastric disturbance has sometimes given rise to a suspicion of pregnancy, and we have not infrequently been consulted from the fear which has thus been excited.

Chlorotic parients become listless, lethargic, and melancholy. They lose interest in society, and in the general events of life, preferring solitude and quiet repose. There is frequently paroxysmal, often regularly periodic headache, chiefly affecting one temple, greatly aggravated by over-anxiety, worry, or other emotional influences. In short, as the foundation of all the symptoms, the nervous system is so completely the seat of the disease that there is not an organ, or tissue, or fluid of the body that escapes.

Causes.—The chief predisposing causes are the lymphatic temperament, and a tendency to struma. In these persons the blood-making function is liable to such disorder as results in a

deteriorated quality of that fluid. Hence the relative diminution of the red corpuscles, and the proportionate increase in the watery part of the blood. This predisposition is fostered by hygienic conditions which tend to lower the standard of health, and to vitiate the process of sanguinification (*Ludlam*).

Among the hygienic conditions, the most favorable to the production of Chlorosis are—confinement in badly ventilated or imperfectly lighted or shaded rooms—under-ground kitchens and back rooms, shut in by high walls excluding the direct rays of the sun and a free circulation of air—and deprivation of open-air exercise and recreation. Some time since, the writer was requested to visit a chlorotic patient in London, in whom the symptoms were very marked. She lived in a large house thickly hemmed in by lofty buildings, and for convenience or from choice passed most of the day in a low dark room. We saw flowers in the upper rooms, and remarked as we entered the patient's room, "You have no flowers here." Our patient quickly answered, "Oh, no! they won't grow in this room; they want more light." But she failed to perceive that her devitalized frame and languishing nerve-power were the result of those bad hygienic conditions to which she would not even subject her plants!

Other causes are—too studious and sedentary habits; chronic inflammation of the intestinal canal; enlargement and inaction of the mesenteric glands; long-continued grief, unrequited love, anxiety, fright, or fatigue; abnormal excitation of the sexual organs; uterine or ovarian disease, innutritious food. Bread and butter forming the staple diet, the relish for animal food of every kind almost completely ceases. These and similar causes not merely effect gradual changes in the composition of the blood, but impair the process by which the blood itself is made.

Treatment.—*Arsenicum.*—Œdematous swelling of the feet, puffiness of the eyelids, distention of the abdomen, morbid cravings, frequent fainting, and extreme debility.

Calcarea Carb.—In cases in which there is tendency to scrofula or consumption, as evinced by the presence of glandular enlargements, cough, etc., and in other cases attended with dropsical swellings of the feet and difficulty of breathing.

Cyclamen.—The patient is pale, chilly, and languid, with

nausea, loss of appetite, headache, vertigo, dimness of sight, and tendency to looseness of the bowels.

Ferrum.- Fits of oppression, palpitation, and anxiety, poor appetite, pale face, swelling of the face and ankles, absent, scanty, pale, or watery menstrual discharge, especially in patients of strumous constitutions and lymphatic temperament.

Graphitis.—Too late, scanty, painful menstruation, dull, pressive, or wrenching pain in the lower part of the back, constipation, and unhealthy condition of the skin.

Helonias.—Chlorosis with atonic conditions of the womb, and defective digestion and assimilation.

Ignatia.—Nervousness; mental depression, or rapid emotional changes.

Natrum M.—Sadness, oppression, anxiety, coldness of the hips, heat in the face, weight in the abdomen, œdema, and with occasional, ineffectual indications of menstruation.

Phosphoric Acid.—Great debility, listlessness, and apathy; night sweats, leucorrhœa, etc., especially if the chlorosis be due to continued abnormal excitation of the sexual organs.

Plumbum M.—Chlorosis with obstinate constipation and a general cachectic condition.

Pulsatilla.—Scanty or absent menses; loss of appetite or taste, and tendency to relaxed bowels; weeping mood. Puls. is chiefly suited to uncomplicated cases.

Sepia.—Painful downward pressing in the pelvis, aching pain in the abdomen, swelling of the sexual organs, leucorrhœa, sick headache, etc.

Sulphur.—This medicine is of great service in all patients who have been habitually unhealthy, with a tendency to constipation and cutaneous eruptions.

Administration.—A dose three or four times daily. When improvement sets in, the remedies should be given at longer intervals.

Accessory Means.—Good nourishing food, including milk and milk diet, brown bread, animal broths, oysters, cod-fish, and juicy varieties of meat. Frequent exercise in the open air and sunshine, avoiding fatigue; horseback exercise is particularly advantageous; also rowing, croquet, and other out-of-door games.

Riding in an open carriage, and walking, are also useful. The air breathed, both indoors and out-of-doors, should be pure. Light should be freely enjoyed. Cold bathing, particularly in sea water, is much to be commended. Persons unaccustomed to bathe, or extremely sensitive ones, should commence with tepid water, and the temperature be gradually lowered till a cold bath can be advantageously borne. Cold-bathing is very necessary, in consequence of the extreme sensitiveness of chlorotic patients, which may by this means be diminished.

Chlorotic patients are notoriously fond of ease, and desire to remain in a state of muscular inactivity; but this desire must no more be yielded to than that of travellers to the soporific effects of intense cold; for the habitually cold skin of chlorotic patients causes a half-poisoned state of the blood, by the retention of what should be excreted, and the imperfect oxygenation it undergoes. They should therefore be urged and forced to exert themselves, so that the blood may circulate more rapidly, and thus absorb that due quantity of oxygen which is necessary to impart to it those vital properties which excite all the organs to perform their proper functions (*Tilt*).

It is very important that cases suspected to be due to secret habits should be unobtrusively watched, and, when once certainty concerning this all-important subject has been ascertained, every means should be adopted to induce the patient to abandon the injurious practices.

Chlorosis and Consumption.—In Chlorosis there is often a slight hacking cough, dyspnœa, or other chest symptom, leading to a suspicion of Consumption; although an examination at once enables a professional man to decide on the real nature of the case. The presence of the anæmic murmurs, previously described, the normal characters of the respiratory movements and sounds, the absence of hectic, and of wasting to any great extent, are sufficiently marked to distinguish Chlorosis from Phthisis. Chlorosis essentially consists in the absence of the red corpuscles or coloring matter of the blood; whereas in Consumption contamination of the blood is superadded. In the former disease the temperature is below, but in the latter it is above the normal standard. There is also this essential difference in the

treatment,—that in the former we have but to supply the missing elements of the blood, and even the most unpromising cases are readily and perfectly amenable to our remedies; but in the latter we have to exterminate a poison, and we need not remark that too many cases resist every known means of cure.

Falling of the Womb (*Prolapsus Uteri*).

Definition.—Prolapsus, the most frequent form of uterine displacement, consists of a descent of the womb, in different degrees, from simple relaxation and bearing-down upon the upper portion of the vagina, to complete protrusion of that organ from the vaginal passage. It most frequently occurs in married ladies beyond the middle age, but it is also liable to occur in young unmarried females of relaxed constitution after dancing, running, or too severe exertion during menstruation.

Degrees.—Three degrees of prolapsus uteri have been described —viz., relaxation, where the smallest descent has happened, with slight pressure on the higher parts of the vagina; prolapsus, where the organ descends farther, or presents at the external orifice; and procidentia, where there is protrusion through the external parts. But the term "prolapsus" is now generally used to express all the varieties. In any descent of the womb, the degree will vary considerably if examined immediately after active exercise, or after quiet rest in the horizontal posture. Slight relaxation often exists a long time without attention being directed to it.

Symptoms.—These are numerous, and vary in different cases, but the following are most commonly present:- -bearing-down sensations in the vagina; dragging and aching pains in the small-of-the back, and around the loins and hips; frequent sensation as if something would escape from the vagina; weariness, soreness, and faintness, with indisposition to stand; leucorrhœal discharge; often increased menstruation, and frequent desire, and sometimes inability, to pass water; nervousness; irritability of temper; indigestion, constipation, etc. In procidentia the annoyance and inconvenience which the impediment causes are very great. The symptoms are aggravated by walking, lifting, etc.; and relieved by rest in the horizontal posture.

Causes.—Probably the most frequent cause is getting up too

soon after childbirth, when the womb is larger than usual, and when also its perineal support below has been weakened by the process of parturition. This is more fully explained in the Section on "Subinvolution." Luxation of the uterus may, however, take place at puberty, especially if menstruation begin at too early or too late a period, the increased weight of the congested organ predisposing to prolapsus. Occupations, such as those of laundresses, cooks, etc., are fruitful causes, especially if followed when the womb is relaxed or large. In other cases, one of the following causes may have been in operation:—sexual excesses, injuries from falls, sudden straining, jumping, over-lifting, etc.; long-continued coughs; excessive vomitings; chronic indigestion, Constipation, and Piles; tight lacing; a general relaxed condition of the system, either constitutional or the result of sedentary habits; too high living; purgatives, etc. Thus it will be observed that the essential elements in prolapsus are—an enlarged, heavy womb, and relaxation of its natural supports, combined generally with too much standing. Prolapsus of the womb from rupture of the perineum during labor is not otherwise referred to here; as it requires surgical measures for reuniting the torn surfaces.

Treatment.—*Arnica.*—Displacement from a fall, blow, over-exertion, or other mechanical injury.

Belladonna.—Sense of weight and bearing-down in the region of the womb, with heat and tenderness: especially suited to plethoric females who menstruate profusely, with excessive sensibility and irritability.

Helonias. — Prolapsus, with other atonic conditions of the womb.

Lilium Tig.—Bearing-down sensations, aggravated by walking uphill, or taking a false step; excoriating yellow Leucorrhœa; mental depression.

Lycopodium.—This remedy is sometimes required for similar symptoms to those mentioned under Nux V.

Nux Vomica.—Prolapsus of the womb and vagina with constant dribbling discharge; indigestion, flatulence, Piles, constipation with straining at stool, and the passage of lumps of hardened fæces, pain in the back, and pressing pain over the hips.

Podophyllum.—Prolapsus uteri with concurrent rectal troubles.

Sepia.—Prolapsus with great irritability and disposition to faint, or consequent upon Leucorrhœa, or when the menses are irregular, scanty, and attended with loss of appetite, nausea, constipation, bearing-down after exercise, frequent desire to urinate, drawing pains in the thighs, and a feeling as if the contents of the pelvis would fall out. Sepia is suited to feeble, nervous women of sensitive skin, with an easily-strained muscular system. A yellowish leucorrhœal discharge, itchings, eruptions, and tendency to uterine complaints, and Piles, are further indications.

Stannum.—Frequent distressing bearing-down sensation, as if the menses would appear; excessive menstruation, preceded by dejection of spirits; constipation and nervousness.

Sulphur.—Chronic prolapsus occurring in strumous constitutions; constipation, piles.

Accessory Means.—In many cases, postural treatment is nearly all that is necessary. The horizontal posture, with the hips elevated, often suffices to cause the womb to return to its proper place, where it will remain if the patient can retain the recumbent posture. This posture should therefore be maintained as long as is consistent with the general health, especially during the monthly period. It is not, however, desirable or practicable for women to remain long in bed. Exercise is necessary for health, and the industrious portion of the community are compelled to work and walk daily. In these cases a perineal pad gives temporary relief, and if used at the same time that proper remedies are taken, will ordinarily suffice to effect a cure.

The use of appropriate cold baths, followed by general friction of the skin; injections of cold water, or, in some cases, of astringent fluids, with the fountain syringe, and the daily use of the hip-bath, are remedial agents whose great value is authenticated by long practice.

In some severe forms of procidentia a good pessary, accurately adapted to the size of the vagina, may be used with advantage, if properly applied and not worn too long. Its injudicious use aggravates the mischief. A physician should always be consulted in such cases.

Violent exercise, lifting heavy weights, scrubbing, ironing,

straining at stool, or sitting too long in a constrained posture, must be avoided. Brown bread, vegetables, etc., should be taken to prevent constipation.

Prolapsus uteri is so often associated with constitutional causes —general debility, involving the digestive and nervous systems— that a cure must be sought through general constitutional measures, and it is desirable, if practicable, to confide the treatment to a homœopathic practitioner.

Inflammation of the Womb.

This affection may occur in any adult female, and is an occasional serious complication of pregnancy, or of child-birth. The disease may be acute or chronic; the cervix is the part generally involved, and the ultimate tendency of inflammation of the deeper tissues of the womb is towards ulceration.

Symptoms.—An attack may commence with a chill, followed by febrile symptoms—full, jerking pulse, great thirst, nausea and vomiting, and sometimes diarrhœa with tenesmus; the bladder is irritable, and there is a feeling of throbbing in the vicinity of the womb, which is swollen and painful. The precise seat of pain depends upon what part, or whether the whole of the womb is involved. There are throbbings, irritability of the bladder and rectum, and the patient maintains the recumbent posture, as sitting aggravates the pains. Sometimes the disease assumes a typhoid character, and there is excessive prostration, and a dirty-yellow-coated, dry tongue. By comparing these symptoms with those described under "Dysmenorrhœa," they will be seen to vary sufficiently to prevent confusion in the diagnosis.

Causes.—Exposure to cold; sitting or standing on damp grass, etc.; suppression of the menses; mechanical irritation, as from excessive coition, tumors, etc.

Treatment.—Professional advice is essential in so serious a disease. Until it can be had, Acon. and Bell. should be administered early, in alternation, every thirty to sixty minutes. As improvement ensues, the medicines may be given less often, or supplanted by one more appropriate,—Ars., Merc., Hep.-S., Sabi., Nux V., Iod., Plat., or Sulph.

Accessory Means.—Rest as complete as possible, simple diet,

with cooling drinks, and fomentations of hot water. In the early stage of the disease the patient may sit in hot water for twenty or thirty minutes, with the shoulders and feet covered. She must retain the recumbent posture until all inflammatory symptoms have subsided.

Polypus of the Womb.

Among the disorders to which the womb is subject, one of the most troublesome is the formation of tumors. About one-third of the cases of uterine disease, after attaining the thirty-fifth year, are due to these growths. There may be one or many, they may vary from the size of a small marble to that of a child's head, they may weigh less than an ounce or many pounds. But whatever be the discomforts and dangers attending them, there is this consolation, that they are not malignant, and do not degenerate into Cancer. Those to which special reference is now made are Polypi.

Varieties.—Three kinds of uterine Polypi have been observed: mucous or gelatinous (similar to nasal mucous Polypi); fibroid; and cystic.

Causes.—These have never been satisfactorily ascertained. But they are most frequently developed when the menstrual and reproductive functions are most active, and hence it may be inferred that they originate from some abnormal change or condition which occasionally arises at this period. In some cases it appears that the fibroid Polypus is consequent on incomplete involution of the uterus. [Defective nutrition is no doubt the cause—too great blood-pressure in this locality, resulting in abnormal growths; reproductive organs too active—blood withdrawn from other parts of the body, which must suffer.]

Symptoms.—The most constant and alarming symptom, and that which most commonly compels attention to the disorder, is, frequently-recurring and distressing hæmorrhage. The flow is very free; usually, but not always painful; very weakening; and returns every two or three weeks. Other prominent symptoms are enlargement of the womb, sensation of weight, dragging-down, aching, or pain in the pelvis; tenesmus and irritation of the bladder or rectum; uterine colic; the usual symptoms of

pregnancy; Menorrhagia; and profuse or fœtid Leucorrhœa. Anæmia, palpitation of the heart, want of appetite, indigestion, irritability of the stomach, with retching, constipation, debility, prostration, and unrest, are frequently present. Occasionally, the womb seems to resent the presence of a Polypus, and by contractions similar to those which take place in labor expels it, breaking its attachment and casting it out as a foreign body. Such a termination, however, is not to be expected, and as the profuse hæmorrhages may occasion very serious constitutional symptoms, the sooner a Polypus is removed the better.

Treatment.—The following medicines have the reputation of being able to accomplish the removal of Polypi,—namely, Calc.-C., Con., and Thuya,—but we are not satisfied as to the indications which point to their employment.

Mechanical Removal.—When a mucous Polypus is detected, it should be seized firmly by means of a pair of forceps, twisted off, and the point of origin cauterized with Nitric Acid. Removal by torsion is greatly preferable to excision, for alarming hæmorrhage often follows the use of the knife or scissors. When a Polypus projects from the *os uteri*, its removal is easy; but when it lies higher up in the cervical canal, or springs from the fundus of the womb, the canal, or, in the latter case, the womb itself, must be dilated, the Polypus seized and twisted off, and Nitric Acid applied. Fibroid Polypus is more difficult to remove, as it usually grows from the fundus of the uterus, has a firmer hold, and requires the application of the wire ecraseur. Of course, the care and skill of a professional man are always necessary.

Accessory Measures.—To control the hæmorrhage and to restore the impoverished condition, the Section on "Profuse Menstruation" should be consulted.

Hysteria.

Definition.—The word Hysteria is derived from the Greek word *hystera*—a womb, from the supposed connection of the symptoms with that organ; but it will be directly shown that the uterus and its functions are not essential to the conditions included under the term. The various phenomena thus designated may be defined as a nervous disease of a general and not of

a local origin, caused by some source of irritation supervening upon a condition of depressed nerve power from emotional causes, and may arise in conjunction with uterine irritation, or entirely independent of such cause. It consists, essentially, of a defective or perverted will, heightened or altered general sensibility, and, usually, some impairment of the general health, but is not necessarily dependent on the female organs of reproduction.

In proof of this the following statements may be adduced:—Hysteria is not limited to the unmarried condition, but often exists in the married, even in the happily married—in pregnant women, in nursing mothers, and in women who have passed the critical age. It often exists, in its highest expressions, in persons whose monthly period and general uterine functions present no anomaly whatever; various functional and organic diseases of the organs in question often exist without any hysterical symptoms; women who have been born without a uterus have been hysterical; and, again, it is well known that Hysteria sometimes exist in the male sex.

Causes. — Debility is a great factor in the production of Hysteria. Indeed, the absence of any *post-mortem* signs of disease leads to the conclusion that this is generally the sole predisposing cause. Where the supply of blood to the nerves is defective in quantity, or quality, the most favorable condition exists for the production of Hysteria; for the nerve-centers being thus predisposed, any trivial irritation may excite the characteristic phenomena. While, therefore, Hysteria is a disease of a nervous character, it may be called into activity by any affection or event that operates powerfully on the system, like suppressed, irregular, or profuse menstruation, Leucorrhœa, pregnancy, prolonged nursing, depressing emotions, fright, the loss of a husband, child, or friend; disappointed love, novel-reading, loss of sleep, and a luxurious mode of life. A predisposition to the disease may be transmitted from the parent, or it may be fostered in the daughter by the force of the example of a nervous mother or elder sister.

Symptoms.—Hysteria is remarkable for the wide range and indistinctive character of symptoms, and the multitudinous diseases it may mimic; we may mention especially—loss of voice,

stricture of the œsophagus, Laryngitis, a barking cough (more annoying to the hearer than to the patient), Pleurisy, heart-disease, difficulty in urinating, Neuralgia, disease of the spine or joints, and many other inflammatory diseases. In these cases the patient deceives herself, and endeavors by extreme statements of her sufferings to mislead others. An observant medical man, however, need never be deceived. In some cases there is indigestion, a more or less definite affection of the head, chest, or abdomen, or other condition of impaired health or constitutional delicacy. But some cases of Hysteria exist in which there can be detected no other than a nervous derangement. It must not, however, always be inferred, because we designate an affection "nervous," that the symptoms complained of are not real. The element of exaggeration enters so largely into the hysterical constitution, whether that constitution be original or acquired, that we know persons of this temperament are possessed of so refined a sensibility to pain and disease that they suffer consequently, under similar circumstances, far more than others of an opposite temperament.

The most common forms which Hysteria assumes are, according to the late Dr. Anstie, the following, although such a many-sided malady occasionally takes on various other characters. One of the most frequent types of Hysteria is that in which a young girl, harassed by a general feeling of ill-health from too rapid growth, or menstrual difficulties, or both; depressed, perhaps, by an injudicious system of "cram-work" in education; or worried about religion, becomes somewhat anæmic, languid and feeble in her movements. By degrees the power of volition begins to share in the bodily languor, and the effort of making up the mind to any course of action, especially such an action as is only prompted by the plainest duty, becomes hateful. From time to time, however, she astonishes both her friends and herself by the exhibition of surprising energy in the performance of any work of body or mind which is made palatable by emotional stimulus. She has not any convulsive paroxysms, or other violent manifestations of her uncomfortable state, but she is rather given to causeless tears, and equally causeless laughter. On the whole, however, the spirits are much depressed. Two symptoms are rarely absent—flatulence, and occasional attacks of palpitation, with pain in the

left side; there is also generally headache. As the case proceeds the mental rather than the bodily symptoms predominate; the imperfect self-control becomes more manifest; there is a tendency to helpless dependence on those around, and an imperious craving for sympathetic petting and fuss; and if that sympathy be injudiciously and excessively given the moral degeneration is apt to become steadily greater: the patient more and more limits her mental life to such thoughts and feelings as can give her some emotional pleasure, she becomes careless of duty, and very commonly also careless of truth.

Our next portrait is a young, fresh, healthy-looking girl, well grown, without a trace of anæmia, indeed not infrequently with rather a high color. She may or may not have any derangement of the monthly function. She is usually excitable and sentimental, and suffers frequently from violent palpitation and sudden flushings. Sometimes she loses her voice for days and weeks at a time. But frequent attacks of rumbling wind and sudden distention of the belly constitute her chief distress. When these attacks last longer than usual, the "wind seems to rise to her throat," and the sensation of "globus hystericus" becomes fixed there. Occasionally the attack ends with a crying fit, and the discharge of much pale urine; but this is not always the case. Such a patient is often a good hard-working girl, with no perpetual indolence of will, but only suffering temporary lapses into defective volition and want of self-control, which lapses may often be accounted for by fatigue from over-exertion. Even this kind of person is made worse if she be surrounded by friends who continually make a fuss about her health. Such patients are commonly found among overworked maid-servants, and generally they do not get the chance of being injured by excessive sympathy.

The third portrait is also one of which most medical men have seen examples. A young girl, in whom the menses have only just appeared, or have even not yet commenced, begins, without obvious reason, to take to sentimental notions, or to adopt an exaggerated "goodiness." She is the pet of the worthy village clergyman and his kind-hearted wife, who soon perceive that she is "delicate;" she is a martyr to headaches, and to pains in the back and other parts, which come and go with extraordinary

rapidity. Gradually there grows up a legend in the neighborhood to the effect that "sweet Mary Jones has a diseased spine;" and, sure enough, Mary Jones takes gradually more and more to her bed, and at last lies there continually, "quite paralyzed in her legs, you know." Perhaps she may never get further than this stage, being luckily dragged out of it by some shrewd and energetic doctor. But if left to her own devices she rarely stops at Paraplegia. The next stage is whispering, or total loss of voice, and then comes inability to swallow. The story of the "fasting girl" is well known; and it is probable that there is more or less of conscious deception in all these cases of hysteric dysphagia, where the refusal of food is apparently complete, for such patients are by that time nearly always accomplished liars. At any rate, this is certain, that the whole train of symptoms are often rapidly curable by moral influences skillfully applied, and simple tonic remedies.

Take yet another picture. A poor married woman has had children with great rapidity, and is therefore trying to avoid a fresh pregnancy by suckling her last baby, though it is eighteen months old. She is anæmic and haggard; she complains of almost constant sore pain over the top of the head; she complains also with especial bitterness of pains at particular points in the trunk, chiefly in the spine, in the right hypochondrium, and beneath the left breast. The voice is whispering or absent, and there is nearly always hysterical globulus.

Sometimes a medical man may for a moment experience difficulty in deciding whether a patient be suffering from Hysteria, or from an acute inflammatory disease; but he is able by the use of the thermometer to determine the point. The temperature of patients in acute inflammation is invariably raised; but the temperature of hysterical persons is always natural (98 deg. Fahr.). Further, the state of the pulse, the character of the pains, and the general condition of the nutritive processes, furnish additional proofs of the real character of the disease. The ideal nature of hysterical sufferings may be further proved by diverting the patient's attention from the part complained of: then, firm pressure on the part, or the sharp movement of a joint, may be borne without complaint, whereas the slightest touch was immediately before said to be "agonizing in the extreme."

In Hysteria there is absent the suddenness of seizure, the complete loss of consciousness, the dilated pupils, the bitten tongue, and the total disregard of injury to person or clothes that mark Epilepsy. There is much sobbing and crying, much exhaustion, but no perfect stupor in Hysteria, nor is an attack followed by profound sleep.

If the epiglottis be touched with the finger, and prove insensible, the case is hysterical. A French physician is said to have thus tested twenty thousand cases.

A paroxysmal form of Hysteria may be caused by some transitory occurrence, as a real or imaginary grievance. The patient is talking in an agitated manner; she is laughing or crying, or both; then she bursts out into an immoderate fit of one or the other; the *Globus hystericus* begins to form and to rise, and as soon as it reaches the throat, the patient screams or makes an incoherent noise, appears to lose all voluntary power and consciousness, and falls to the ground. On closely watching a case, however, it will be noticed that there is not absolute loss of consciousness; the patient contrives to fall so as not to injure herself or dress; an attack does not occur when she is asleep or alone; the countenance is not distorted as in Epilepsy; the eyelids may quiver and the eyes be turned up, but the eyes are not wide open, nor the pupils dilated, as in Epilepsy, and the patient may be observed to see and to look, and to have her paroxysms at longer intervals if she observes the medical attendant conversing on other subjects. The breathing may be noisy and irregular, but there is no such absolute arrest of breathing as to cause Asphyxia; the fit continues for an indefinite period, followed by apparent great exhaustion, but not by real stupor.

An easily-flushed face; the features rapidly respond to the mental emotions; the upper lip is deep and prominently full. The eyeballs are large, and the sclerotic (white-of-the-eye) of a transparent sky-blue; the pupil is much dilated, giving a general dark hue to a naturally light eye, and the conjunctiva is smooth and bright from tears on every emotion. The eyelids are large, full towards the outer angle, giving a drooping, appealing expression to the face (the "sweet expression" of ladies). Of these several hysterical marks, the puffiness of the eyelids and the dila-

tation of the pupil are the most constant—indeed, are seldom absent and seldom deceive (*Chambers*).

Treatment.—*Asafœtida.*—Hysteria from inertia or irritability of the biliary system, with burning dryness of the throat; cutting, crampy pains, or distention of the abdomen; nausea and inclination to vomit; constipation or diarrhœa, with frequent urging; high-colored, strong-smelling urine; sensation as of a ball rising in the throat; premature, painful menstruation; uterine excitement; depressed, fitful spirits.

Aurum.—Hysteria with excessive menstrual discharge, congestive headache, melancholy, etc.

Belladonna.—In the congestive form; also during the fit, when the face is red and turgid, and the veins of the neck swollen, with other symptoms of determination of blood to the head.

Calcarea Carb.—When the Hysteria approaches to Epilepsy, too frequent and profuse menstruation, nausea, faintings, and spasms on swallowing.

Causticum.—Loss of voice, pain in the neck or abdomen; profuse flow of urine; dejection.

Cimicifuga.—Hysteria associated with uterine disturbance; mental restlessness, irritability, and despondency; pains in the left side and under the breast; sinking at the stomach, etc.

Cocculus.—Hysteria with menstrual colic, irritability, dejection, and copious discharges of pale urine.

Coffea.—Hysterical symptoms from worry, with sleeplessness, the mental faculties being incessantly active. According to Dr. Ludlam it is specially adapted to the affections of elderly ladies.

Ignatia.—Hysteric convulsions with the sensation of a ball in the throat, suffocative constrictive sensation, and difficult swallowing; heightened exhausted impressionability of the whole nervous system, with frequent changes from high spirits to dejection; Hysteria from disappointment, mortification, or any intense mental excitement.

Nux Vomica.—Hysteria with constipation, bitter or acrid eructations, flatulence, hiccough, distention and pain in the stomach, headache, giddiness, faintness, etc. After a few days, Sulphur may be substituted.

Platina.—Hysteria with depression of spirits; anxiety, irrita-

bility, and nervous weakness, especially if associated with uterine congestion; early, excessive, or too prolonged menstruation; sexual excitement.

Pulsatilla.—Hysteria with suppressed period or uterine disorders, especially when the Puls. temperament corresponds. It may be followed by Sabina or Silicea.

Sepia.—In persons of a sad, desponding disposition; spasms in the throat or chest; anxiety; faintings, with much perspiration; menstrual irregularities.

Valerian.—Hysterical spasms occurring chiefly in the evening; lump in the throat; profuse, clear, watery urine; great emotion, tendency to cry, and prostration.

Accessory Treatment. — I. *During the Fit.* — After the patient's clothes are loosened, and an abundant supply of fresh air is secured, an attempt may be made to arrest the hysteric convulsions by a method suggested by Dr. Hare—viz., that of forcibly preventing the patient from breathing for a certain time, by holding the mouth and nose. The effect of such constraint is to make the patient, when allowed to do so, "draw a long breath," this vigorous inspiration being usually followed by a relaxation of all spasm, and a disappearance of the fit. Prolonged attacks are notably benefited by this plan of treatment; in brief ones there is neither time nor need for it. Dashing cold water on the face and neck, or pouring water out of a large vessel from a height directly over the mouth and nose of the patient, so as to stop her breathing and force her to open her mouth, often succeeds. "A calm manner," says Dr. Reynolds, "the absence of all appearance of alarm, and of either scolding or distressing sympathy —all of which things the apparently unconscious patient observes much more accurately than do her frightened friends– will sometimes bring a fit to a speedy end."

II. *Between the Paroxysms.*—1. *Occupation.*—Besides regular out-of-door walking exercise, cheerful society, conversation, and recreation, physical and mental occupation of a useful nature should be strictly enjoined. Healthy, useful employment should become a uniform habit, and the patient be led to feel that life is not a mere holiday to be passed in frivolity and idleness, but a highly important period of existence to be spent in usefulness

and enjoyment. Absence of occupation favors that meditative mood in which hysterical patients are liable to fall, and renders cure difficult.

2. *Removal from Home Influences.*—Nothing, perhaps, interposes greater obstacles to recovery than the misplaced tenderness, anxiety, and sympathy of friends, and the constant recurrence of influences which tend to perpetuate the disease; so that sending the patient from home away from her accustomed habits and associations, under the care of kind but judicious friends, offers a favorable chance of recovery. This is easy of accomplishment in the poorest classes, who can be sent into a hospital, and in the richest, who can be placed under the care of a physician or competent friend. But this is often next to impossible for the families of retail shopkeepers, curates, village doctors, and others, from the union of a light purse with a weighty feeling of independence. One plan can sometimes be adopted – namely, to negotiate an exchange of patients, where families of about the same social standing are simultaneously afflicted with a hysterical member (*Chambers*).

3. *Disuse of Stimulants.*—The daily consumption of alcoholic beverages for the debility and other symptoms of Hysteria is a delusion, and should be strenuously opposed. In Hysteria, wine is a mocker. It yields but the semblance of strength, and instead of benefiting, it tends to confirm and perpetuate the worst symptoms of the complaint. There is, too, real danger lest the patient should soon begin to appreciate the pleasurable sensations yielded by alcohol so highly that she ultimately becomes an inebriate. Faintness from defective nervous supplies is relieved by stimulants, but the exhaustion quickly returns, with the temptation to seek relief by the same remedy. It is most difficult to persuade the patient that the exhaustion is really increased and perpetuated by the stimulant,—and that if she will withhold the irritating draught the nerve-power will recover, the appetite return, and the functions be restored.

4. *The Shower-bath.*—The fortitude involved in submitting to the shock of a cold shower-bath is splendid discipline, and aids the cure by giving the patient more moral power. Besides, shower-baths improve the circulation by forcing the venous blood to the

heart and lungs, and bringing arterial blood to the surface, as seen in the healthy glow of the surface of the body. Patients not accustomed to bathe may commence by taking a few tepid baths. To prevent the inconvenience arising from wetting the long hair of the head, an oiled silk covering may be used to keep it dry.

5. *General Cautions.* — Crowded, badly ventilated, and too brilliantly lighted churches, theatrical exhibitions, novel-reading, tight stays, and late hours in retiring at night and rising in the morning, should be resolutely forbidden. The diet, rest, study, recreation, as well as the various bodily functions, should receive intelligent and uniform attention. When speaking to a sufferer about her disorder, it is well to avoid the term "Hysteria," and to assure her that it is curable and not dangerous.

Hysterical Retention of Urine.—Dr. J. W. Curran recommends a simple and prompt remedy for this distressing symptom —viz., plunging the hands in a wash-hand basin full of the coldest water, and moving them about in it, as if in the act of washing. In every instance in which this expedient was tried it was immediately successful; it may, therefore, be recommended for general adoption as more convenient than a warm hip-bath, and infinitely more desirable than the use of the catheter. The latter, as a rule, is both unnecessary and improper in such cases of retention. As confirmatory of this, any person may notice that the plunging of the hands into cold water, when urine has accumulated to any extent in the bladder, is rapidly followed with an irresistible desire to urinate, although the desire to do so had not been previously felt.

Spinal Irritation.

Definition.—A localized tenderness over the spine, induced or aggravated by pressure on the tender spot, with constitutional weakness, and various reflex symptoms. Spinal irritation is often a combination of the myalgic and hysterical conditions. The affection is essentially nervous in its character, and leaves no discernible *post-mortem* traces.

Varieties.—There are several varieties according to the locality of the lesion 1. *Cervical.* The tenderness being in the back of

the neck. The accompanying symptoms may be headache, faceache, fits of insensibility, affections of the arms, cough, and even pain in the stomach, sickness, or vomiting. 2. *Cervico-dorsal.* The tenderness being centered at the juncture of the neck and chest, and the pain in the stomach and side, oppression of breathing, heartburn, and palpitation are more decided. 3. *Dorsal.* In this variety the hyperæsthesia is in the upper part of the back, with the symptoms of pain in the stomach and side, cough, oppression, fainting, hiccough, and eructations. 4. *Dorso-lumbar.* Here the tenderness is in the waist, and, in addition to the symptoms in the previous variety, there are pains in the abdomen, hips and legs, and urinary troubles. 5. *Lumbar.* The tenderness is below the waist, and there may be a tendency to a kind of paralysis or great weakness of the legs, in addition to the symptoms mentioned under the last variety. 6. *Fugitive* tenderness in different portions of the spine, with the various symptoms previously mentioned correspondingly modified.

Symptoms.—The initiatory are, generally, headache, limited to one spot or to one side, or to the brow or cheek, with sleeplessness, distressing dreams, or nightmare, nausea, or vomiting, cold hands and feet, and alternate chills and flushes. All the symptoms are intensified by exertion, bodily or mental, and the patient evinces an almost constant desire to lie down. The symptoms differ according to the part affected (see Varieties), the most characteristic one being local tenderness.

Spinal Irritation and Other Diseases.—Spinal irritation may simulate or co-exist with Hysteria; but to the skilled observer there are distinguishing features. In Hysteria the soles of the feet, and the skin generally, are commonly insensible to tickling; in spinal irritation, on the contrary, irritability is intensified. Patients do not complain of such extreme depression of strength as in Hysteria, but are chiefly weak when in pain. This affection may be distinguished from actual disease of the spine by observing that the tenderness though excessive is superficial, and the patient complains more when the skin is touched than when the vertebræ are pressed. There is also the absence of impaired nutrition, wasting, and other signs of constitutional disturbance.

Further, in diseases of the spinal cord, as a rule, the spine is

not tender to pressure; whereas in Spinal Irritation such tenderness is perhaps the most marked symptom. The personal and family history, and the cause of the derangement, will aid the diagnosis.

Causes.—The most powerful and frequent predisposing cause is hereditary tendency, especially when Hysteria, Epilepsy, Insanity, or other neurosis exists in the family. What is termed a nervous constitution underlies nearly every case of Spinal Irritation. Anæmia, sexual derangements, sterility, and absence or non-exercise of the maternal instincts, are also predisposing causes. Neglect of physical exercises, sexual excesses, onanism, are powerful and prominent factors of this affection. In short, everything that tends to exhaust vital power, and, consequently, produce a nervous condition, must be accounted a cause. The exciting causes are—shock, or grief; injury to the spine, as by railway accidents, blows, falls, etc. To the latter, men are, of course, equally liable; but the nervous system of women is more impressible, so that the immediate shock is more severely felt, and its sequelæ are more likely to be deep and lasting. For a like reason, various kinds of rough exercise that keeps the spinal muscles on the stretch—jumping, travelling over rough roads, horseback exercise, etc.—may act as powerful exciting causes.

Prognosis.—Spinal irritation from mental shock, in a sound nervous constitution, can generally be cured, however severe the symptoms. When due to injury of the spine, the probability of a cure is in inverse ratio to the extent of the injury. Dr. F. W. Anstie states that such patients usually recover, when it is their interest to do so. When sexual irritation underlies the condition, we can fairly encourage the hope of a cure when there is a prospect of legitimate gratification of the maternal instincts.

Treatment.—*Aconitum.*—Recent cases, and when heats and chills, and other fever symptoms preponderate.

Arnica.—When spinal irritation is caused by injury this remedy is generally required, alone or in alternation with another more suited to the constitutional condition.

Belladonna. — Predominance of brain symptoms; excessive spinal tenderness.

Cactus.—Faintness; palpitation; sensation as if the heart were held tightly.

Cimicifuga.—Nervous restlessness, headache, tremors; nervous weakness and prostration; pain under the left breast or in the left side; pain in the back, and lumbar region; palpitation; numbness of the left arm; uterine irregularities.

Cocculus.—Painful stiffness of the back and one side; oppression of the chest; giddiness; colic; sickness; trembling of the limbs; numbness of the right side.

Ferrum.—Anæmic symptoms; palpitation; menstrual irregularities; inability to retain the urine in the daytime.

Ignatia.—Spinal irritation from mental shock, grief, or associated with Hysteria; depression, sleeplessness, frequent yawning, stiffness of the back, flatulence, copious discharge of pale urine, etc.

Nux Vomica.—Jerking of the hands or arms, pain in the side or stomach, nausea, heartburn, eructations, and constipation; urinary difficulties; sleeplessness and troubled dreams.

Accessory Measures.—A lotion or liniment of Arn., Bell., Ver.-Vir., Acon., or Rhus, for local use, is advisable when the same remedy is being administered internally, especially when the affection is the result of injury. Faradization is often of great service. A few sittings daily for four or five minutes will sometimes completely remove the morbid sensitiveness. A wet compress over the tender spot will also afford relief. Sometimes a Belladonna plaster gives much comfort. Rest in the horizontal posture may be necessary, but it should be combined with fresh air and moderate exercise. Daily exercise in the open air, gently commenced and gradually increased, greatly aids recovery, and by it, combined with remedies, we have witnessed the complete recovery of most unpromising cases. Sea or mountain air is sometimes desirable. The diet should be generous and varied. Generally, stimulants are not necessary, unless by their temporary use the appetite is improved.

But some physicians affirm that stimulants are necessary to the cure of the affection, and attribute as a frequent cause of the disease the neglect of the use of some form of alcohol. Except, however, as a mere temporary expedient, we believe alcoholic stimulants to be unnecessary and injurious.

Occupation for Ladies.—For unmarried patients, after the

severe symptoms have been modified by treatment, it is of supreme importance that some occupation, undertaken in a business-like way, should be provided.

"There is far more good in prophylaxis than in direct curative treatment for these disorders (Hysteria, Spinal Irritation, etc.); and half the sufferings which they produce would absolutely never arise if at the critical period of bodily development the nervous system were steadied and strengthened by the influence, at once sobering and inspiring, of an education directed towards the acquirement of an honorable professional or commercial career, which might give women the inexpressible comfort of feeling that they are independent of such accidents of life as marriage or not getting married."—*Dr. F. E. Anstie.*

We sincerely hope ere long to see a wider range of avocations opened up to ladies, suited to their tastes, education, and social status; for when such occupations are provided, spinal irritation will become of far less frequency.

CHAPTER III.

REPRODUCTION.

Marriage.

The vast practical importance of the various points included in this Section and the following Sections is our apology for introducing them. In other works, and also to some extent in this one, we have attempted to show the value and bearing of pure air and water, light, exercise, recreation, good food, etc., on health and long life. Here, however, we carry our researches further back, and venture to offer suggestions concerning the exercise of those functions of the male and female organs of reproduction, on the integrity of which depends, to a great extent, the physical and moral qualities of individuals.

The question of the marriage of unsuitable persons, or of marriage at an unsuitable age, is often either disregarded, or

viewed from a too narrow standpoint, as if it only concerned the individuals forming the alliance. Our responsibility, however, imposes on us the duty of enforcing the truth that the health, happiness, and material greatness of future generations are involved in such marriages. No one but a physician, who sees human nature in all, even in its darkest aspects, can fully appreciate the subject, or accurately trace its workings in society. The several points, here only briefly alluded to, are of pressing importance, and should be seriously pondered, in all their bearings, by persons contemplating marriage, and by parents and guardians.

From twenty to twenty-five years of age may be stated as the most suitable time of life for contracting marriage on the part of women. Although the function of menstruation commences from the twelfth to the sixteenth year, yet the female constitution is not sufficiently formed and matured till twenty or twenty-one years of age to permit of marriage without risk of injury to health and comfort. Some exceptions to this may exist in persons who have acquired at about nineteen that physical and mental perfection which the majority of persons in this country only attain some years later. On the other hand, too late marriages frequently entail much discomfort, and the children of such parents are often sickly, and die prematurely. But these points are more fully and separately considered further on.

Physiology clearly teaches that both animals and plants must acquire full development before they are capable of reproducing their species in the highest and most vigorous condition. Too early marriage often results in arrest of development, a shattered constitution, and generally impaired health in the mother; such marriages are also generally "less fertile, and the children who are the product of them are weak, puny, and have an increased rate of mortality" (*Duncan*). Further, premature marriage, by anticipating the demands of nature, increases the sufferings and dangers of childbirth. Anatomical facts may also be briefly cited to confirm the correctness of our conclusions. The perfect ossification of the pelvic bones, and their complete union to one another, do not usually take place till after twenty years of age; nor is it till about this period that the pelvis has fully assumed

the form, shape, and distinctive sexual features so admirably suited for the functions of child-bearing. It is well known that the pelvis of the two sexes differs but little till puberty; but at that period the female pelvis begins to assume its striking characteristics; its cavity becomes capacious and broad in both its diameters, and the inlet and outlet also enlarge. These and other characters, so necessary for maternity, are not fully developed till after that maturity of growth, the process of years, which only fairly commences about the time of puberty.

Marriage, if suitable and happy, lengthens life. The relative influence of marriage and celibacy on the duration of life has been ascertained. And the result is that the mortality is considerably less, both among men and women, in the married state, than among the celibate and widowed. This opinion has indeed been controverted; and it has been affirmed that longevity, instead of being a consequence of marriage, is simply a correlation of it; that they are concomitant results of the same cause—viz., constitutional vigor. Where the reproductive instincts are strong the surplus vital energy is great, and the organization is likely to last. This may be true, but we nevertheless think that well-assorted marriage lengthens life.

In thus recording our matured opinion on this subject, we may be excused detailing, in a domestic book, the varied kinds of evidence on which it is based. Let the inquiring mind look around, and somewhat beneath the surface of society, carefully examining what will thus come to view, and proof will be ample and varied that deferment of marriage many years beyond the period indicated is not always consistent with physical and moral well-being.

A considerable disproportion between the ages of the husband and wife is to be avoided. When circumstances are favorable to such an arrangement, there should not be more than three to five years difference between the ages of the man and the woman, the husband being the senior.

A little reflection will convince any one of the disastrous consequences likely to spring from the marriage of unhealthy persons. Disease, as well as peculiarities of character, may be transmitted from parents to children. This is no mere theoretical statement,

but a truth based on practical observations a hundred times verified; and it should convey a most impressive lesson. If, for example, the consumptive young woman marries, she becomes a mother—for consumptives are generally prolific,—and indelibly imprints her infirmity on her offspring, while she exposes herself to the perils of childbirth, a hundredfold heightened in such a disease. The observant medical practitioner only, who can trace effects to their causes, can gauge the suffering and bitter disappointment which results from such marriages, and should be consulted before marriages are arranged. It will be obvious that unless the fountain whence much physical evil flows—hereditary taint—be itself purified, nothing can effectually check the progress of maladies universally prevalent, and destructive to happiness, health, and longevity. So long as a reproducing agent is constantly at work, imprinting at the time of impregnation the elements of disease on countless numbers of children, nothing can prevent the multiplication of the evils consequent on diseases and premature death.

The consequence of the inter-marriage of persons of the same blood, such as first or second cousins, is to perpetuate and intensify any constitutional infirmity in the next generation. Family weaknesses or defects, perhaps of no grave importance, are confirmed by inter-marriage, and may readily become developed into actual disease. The marriage of near relatives in whose families a consumptive cachexia exists, leads to a concentration of the disease in the offspring, and lays the foundation of some of the most destructive maladies to which the human frame is liable. More than this. A convergence of ancestral liability to disease not tubercular is likely to lead to that disease in its most active form. A large proportion of those children who are born with defective senses—blind, deaf, dumb, etc.—are the offspring of near relations. It has been stated on the highest authority that the marriage of first cousins is undoubtedly the most prolific cause of congenital deaf-mutism known, and it frequently affects the sight and constitution generally, and the mental capacity as well. Persons with a slight hereditary liability to Consumption, or other affection, but without any active disease, forming judicious marriages in families of healthy blood, may lead to such an

admixture and dilution of the disease-element affecting the one parental side, that, in process of time, it may become altogether inoperative. But there are very few families in a community such as ours, so free from lurking mischief as to be able to venture on such a course. The tendency of the remarks in this Section, it may be objected, is to restrict the personal liberty of individuals in marriage. We candidly admit this to be the case, and we have elsewhere enforced this doctrine of restricting the liberty of individuals in marriage, and can only here express the hope that a wider diffusion of the doctrines of the hereditary nature of the diseases of humanity may lead individuals to appreciate the extent to which their capacity for weal or woe, and that of their children and their children's children, depends upon their acting in harmony with the knowledge they enjoy of nature and nature's laws, and the wonderful power that an existing generation possesses of molding, to a very high degree, the fates of that which is to succeed it.

Sterility.

There is perhaps no condition in the life of a married woman that more frequently gives rise to reproach and domestic unhappiness than that of Sterility. If she be sterile, she will fail to secure the great purpose of marriage—to "multiply and replenish the earth."

Causes.—To determine in many cases the causes of Sterility, considerable medical knowledge is necessary, and, in particular, the anatomy and physiology of the generative organs. The application of such knowledge not unfrequently enables its possessor to detect and remove causes of Sterility long in existence that would otherwise have escaped observation.

The causes of Sterility may be local, affecting some portion of the generative apparatus; or constitutional, the sexual functions suffering in common with those of the body generally.

The local causes are very varied, and we can only mention a few of the more prominent. Such are—an imperforate hymen, or one only so slightly perforate that effectual congress is prevented; narrowness or partial closure of the vagina, either as a natural defect or as the consequence of difficult labors; tumors or

polypi in the uterus or vagina; closure or partial closure of the neck of the womb, after being torn, as a consequence of difficult labor; the improper use of caustics or aphrodisiacs; the use of purgative drugs; inflammation of the ovaries; adhesion or occlusion of the Fallopian tubes; Subinvolution, displacements, or flexions of the womb; Leucorrhœa; ill-timed or too frequent sexual intercourse; ulceration of the womb, etc.

Leucorrhœa.—This discharge may exert considerable influence by diminishing susceptibility to fecundation, either by its profuseness or by its acridity. It seldom exists, however, to an extent sufficient to cause Sterility, without its influence on the general health becoming more or less apparent.

Membranous Dysmenorrhœa may be a cause of barrenness in this wise: conception may take place, but at the return of the menstrual epoch the patient experiences an abortion by the throwing-off the lining membrane of the womb (which should form the outer membrane of the fœtus), and with it the ovum is expelled. The cure of Sterility from this cause can only be accomplished by the correction of the tendency of the lining of the womb to exfoliate.

The constitutional causes include those in which the general physical powers are exhausted, as the consequence of acute or chronic disease; obesity; severe, protracted, or unaccustomed exertion; too close application to business, or excessive exertion of the brain, thus absorbing an undue amount of nervous power which otherwise would be more equally diffused for the efficient discharge of the general functions of the body. In this way the generative system may be impaired by the divergence of the nervous influence which its healthy functions demand. Under constitutional causes may be classed very early and very late marriages, which show a large proportion of cases of Sterility.

Indolent and luxurious habits, excessive indulgence in the pleasures of the table, and especially the free use of wine, are frequent causes of Sterility.

Defective, or, on the other hand, excessive nervous irritability, may operate as an obstacle to impregnation. Deficient sensitiveness may hinder fecundation; or, the activity of the structures may be in such excess that their vitality is destroyed, as it were, by their own vehemence.

We may also notice what may be termed emotional causes of Sterility; and although these are probably less influential than many of the other varieties, they are still sufficient to operate prejudicially to conception. There should be the most perfect harmony and congeniality of taste, temper, and disposition between the husband and the wife, the one responding to the other, without any sense of discord, or feeling of repugnance.

Treatment.—In the treatment of Sterility, an investigation of the cause, which is the first step towards the cure, should be made, so that if possible it may be removed. Sterility from congenital malformation is generally incurable. On the other hand, numerous cases are exceedingly simple in their nature, and quite amenable to treatment. A temporary separation, or a change of diet, habits, or climate, sometimes leads to successful results. The horticulturist, by transplantation to a congenial soil and climate, and supplying it with altered and suitable conditions, makes a tree, which had heretofore yielded leaves only, produce blossoms and fruit. So equal care and skill in the application of physiological laws and hygienic conditions may be expected to reward the efforts of the physician to make the human species increase and multiply.

A careful selection of food will aid in the removal of the sterile condition. Whatever is nutritive should be preferred: foods that contain a large proportion of phosphorus; fish, especially shell-fish, if it can be digested; these will increase the nerve-power.

Remedies for Constitutional Sterility. — Bary.-Carb., Calc.-Carb., Cann., Coni., Ferr., Helon., Nux V., Phos., Ac.-Phos., Plat., Sabi., Senec., Sep., Sulph.

One or more of the above remedies may be selected according to the general and local symptoms in each particular case, and if combined with constitutional treatment, are often sufficient to bring about the desired physiological change.

Conception.

Impregnation depends on the union of certain elements furnished during sexual congress, and which are alike indispensable. And it needs but a superficial acquaintance with human history to know that the future being, in its physical and intellectual

powers, during the whole of life, is to a great extent determined by the actual condition of the sperm-cell and the germ-cell furnished by the parents. Education, and hygienic connection, it is true, may improve an imperfectly organized embryo; but the fact remains, and its general recognition is of great importance, that the qualities of the germs furnished at the period of impregnation will cling to the individual during the entire period of natural life. The practical lesson to be gathered from this fact is, that sexual connection, at least whenever conception is a possible result, should only take place under favorable conditions. There should be at the time the most perfect health; also freedom from bodily fatigue, mental excitement or depression, and the disturbing influence of active digestion, as after a full meal. The essential conditions, then, necessary for the production of healthy and beautiful children are, good health on both the paternal and maternal sides, and the observance of correct rules, a few of which only are referred to in this work.

The time most favorable to impregnation is that immediately following the cessation of the menstrual discharge. Women have then a much greater aptitude to conceive. "Everything seems admirably prepared at this period for the reproduction of the species" (*Cazeau*). The explanation of this may be here briefly summarized. At every menstrual period an ovum or egg is matured and expelled from its Graafian vesicle, and a woman is only liable to impregnation on its meeting and blending with the necessary fecundating principle. The time occupied by the passage of the ovum from the ovary to the uterus is not accurately known, but varies from five or six to eight or more days, differing probably in different persons and in different conditions of health. When the passage of the ovum is completed, the liability to pregnancy is supposed to cease till after the next menstruation. An entirely different doctrine, however, to that above enunciated is now beginning to prevail, and we will now briefly state the new, and probably correct, doctrine. Modern research tends to prove that a developing ovum or growing embryo does not belong to a menstrual period just past, but rather to one immediately prevented by fecundation. In short, menstruation is now considered to be a degenerative process, a

kind of fatty metamorphosis similar to that which takes place at the end of pregnancy, and its occurrence proves that the ovum has already perished. Hence, according to this doctrine, the time most favorable to conception is the few days preceding the monthly period.

Maternal Impressions.

Some doubt has been expressed as to whether impressions made upon the mother, by fright or otherwise, affect the unborn child. Arguments have been employed to show, on physiological grounds, that the fœtus cannot be influenced. But facts are stronger than arguments. We might quote numerous instances, some from our own experience, in which most unquestionably congenital deformity could be accounted for only by impressions received by the mother during pregnancy. Any strong, striking impressions, not necessarily the result of fright or terror, may affect the child. We therefore counsel those who are pregnant so to fortify their constitutions by good habits that they may escape the nervous condition which is susceptible to impressions, to avoid whatever may expose them to risk of being struck with what is disagreeable and repulsive, and to surround themselves with pleasant associations and objects of grace and beauty. If a child unborn is affected by what is repulsive, it may also be susceptible to what is attractive. All persons cannot choose their circumstances and associations, nor can all avoid the risk of meeting with what is disagreeable;—"no caution guards us from surprise." But it is possible to all to avoid what is enervating, and to adopt what is strengthening to the constitution.

CHAPTER IV.

PREGNANCY.

Signs and Symptoms of Pregnancy.

The signs of pregnancy vary considerably in different women, both as to their nature and the periods of their occurrence. The inquiry as to the existence of pregnancy is often one of great

importance and anxiety, and we therefore place before the reader the most characteristic signs and symptoms to which this condition gives rise. In estimating the conclusiveness of these signs reference must be had to their number and importance, the previous condition of the patient, and any accidental causes which may have been in operation to produce abnormal changes. Only four of the following signs can be considered as certain, and these only when clearly made out; they are—the sounds of the fœtal heart, the movements of the child felt by another, fluctuation, and ballottement. The other signs are probable ones; probability, however, almost rising into certainty in some cases and at cerain periods of gestation.

1. Absence of Menstruation.—One of the first circumstances which leads a woman to think herself pregnant is the arrest of the usual monthly discharge. If the suppression of the menses occur in a healthy woman, who had before been regular, and who has not been exposed to cold or wet, or any other accidental cause likely to influence the menses, and especially if at the second or third period the menses are still absent, pregnancy may be suspected. This sign will be much more conclusive if there are superadded to it other symptoms indicative of pregnancy, such as those described further on.

But although this is one of the earliest signs of pregnancy, still no certain conclusion can be arrived at from it, inasmuch as the menstrual function may be suppressed from causes altogether distinct from pregnancy—mountain air, an entire change of habits, a sea-voyage, etc.; or conception may occur prior to the establishment of menstruation, or immediately after ceasing to nurse, and before the function has had time to recur. Again, the menstrual discharge may be suspended as the result of disease, and conception may take place before that function is re-established.

It therefore follows that, though the absence of menstruation is of considerable value as evidence of pregnancy, it cannot, *per se*, be regarded as an absolute sign.

2. Morning Sickness.—Generally, in from two to six weeks, sometimes immediately after conception, women suffer more or less from nausea, and sometimes vomiting, on first taking the

erect posture, probably from the uterine vessels being then more congested, and hence termed Morning sickness. Occasionally, these symptoms are so severe and persistent as to impair very seriously the health of the patient; on the other hand, some patients do not experience sickness at all.

In consequence of its intimate nervous connections with all parts of the body, the stomach often acts sympathetically in comparatively trifling derangements. Cerebral excitement, nervous irritation, affections of the bowels, kidneys, liver, etc., are all capable of exciting abnormal action in the stomach resembling that which attends pregnancy. As an isolated sign of pregnancy, therefore, this is one of but limited importance; it may be absent altogether, occur at unusual times, or take unusual forms; but when it is combined with other symptoms described in this chapter, occurs in the usual order of time, and there is no apparent cause for it, such as indigestion, and the tongue is clean, and the appetite and general health continue good in spite of the nausea, it furnishes an important link in that chain of evidence which indicates the pregnant condition.

The treatment of this condition is described further on.

3. Enlargement of the Breasts.—The examination of the breasts furnishes an experienced observer, acquainted with the general anatomy of the glands, with valuable data on which to found an opinion touching the existence of pregnancy. Generally, in about six or eight weeks after conception, often earlier, there occurs a sensation of fullness, with throbbing and tingling pain in the breasts, accompanied by their enlargement. They become larger, firmer, and feel knotty, and after a time a milky fluid may be secreted. But these symptoms cannot alone be relied upon as evidence of pregnancy, since irritation of the utero-genital apparatus, suppressed menstruation, uterine tumors, or even, in some females, the appearance of the monthly discharge, may give rise to them. A temporary enlargement, simply consequent on marriage, is sometimes observable, without the occurrence of conception. Enlargement of the breasts may also be due to fatty deposit: but in this case other parts of the body will present evidence of a proportional increase of the fatty material. The true character of the enlargement is easily recognizable by

the touch of the experienced finger; that from fatty enlargement is soft and uniform, but that from pregnancy is hard and knotty, and the lobules of the gland may be felt beneath the skin, arranged in a regular manner around the nipple. Enlargement from chronic disease is perhaps less likely to lead to an erroneous conclusion, as one breast only is involved, and that but partially so.

4. Darkening of the Areola around the Nipple.—In the virgin state, the color of the nipple and the areola is usually but a shade deeper than that of the skin generally; but in about six or eight weeks after conception, the delicate pink-colored circle around the nipples becomes several shades darker, the circle increasing in extent, and in depth of color, as pregnancy progresses. This change is so strongly marked in primiparæ, as to afford a good sign of gestation. It is, however, rendered of less general value from the fact that after the first pregnancy the dark color becomes permanent, and is but little modified by subsequent ones. Concurrently with the altered color of the areola, the nipples and surrounding integuments become swollen, puffy, and more moist, secreting a fluid which stains the linen; and the veins beneath the skin become more visible. Prominent points or glandular follicles, varying in number from twelve to twenty, project from the sixteenth to the eighth part of an inch, immediately around the base of the nipple. These changes, which are often well marked, are not, however, always so. The darkening of the areola is less marked in women of light complexion; and something resembling it, as also enlargement of the mammary gland, is said to be present when the uterus is distended from other causes than pregnancy.

Alterations in the size and appearance of the breasts, the two signs just referred to, afford to the educated hand and eye of the practitioner valuable evidence: they have also this additional importance, that an examination of them is easily obtainable, and for various reasons, more readily conceded than one involving the vagina and abdomen.

5. Milk in the Breasts.—This sign, considered very conclusive of pregnancy, is often unreliable. Women who have borne children sometimes continue to secrete milk for a long time—even for years; in such cases, therefore, this sign is of little value.

Milk in the breasts also occurs in other conditions of the system besides pregnancy, and even in females who have never borne children.

6. Enlargement of the Abdomen.—After impregnation, an increased afflux of blood occurs towards the womb, the tissues of which gradually expand, imparting a feeling of weight, fullness, and sensitiveness in the utero-genital organs.

The gradual enlargement of the uterus furnishes a tolerably accurate guide to the period of pregnancy, by the height which it attains in the abdomen. In about two months, the intestines are somewhat elevated, and by the end of the third month, the enlargement may be perceived; at the fourth month, the womb rises out of the pelvis in the form of a hard round tumor, and then gradually rises, and enlarges the whole abdomen. It reaches the umbilicus (navel) at the sixth month, and is highest at the ninth, when it reaches the ensiform cartilage, and impedes the descent of the diaphragm; during the last month it sinks a little.

The sensation conveyed to the hand by the pregnant uterus is very different from that of the abdomen distended by fluid, flatus, etc.; the former being firm, elastic, defined; the movements of the fœtus may be felt by the practiced hand: but in the latter there is an absence of firmness and elasticity, and the tumor is not defined. On reaching the umbilicus, the uterus pushes it forward, so that in about the sixth month it is more prominent than natural, and afterwards it protrudes somewhat from the surrounding skin.

Enlargement of the abdomen, as a sign of pregnancy, is liable to variation; it may be distended by tympanitis, or fæcal accumulations in the intestines, or by ovarian dropsy; or the uterus may be enlarged by air, fluid, or hydatids. In many cases the abdomen even becomes flatter at first, from the sinking of the impregnated uterus in the pelvis, attended perhaps with a slight retraction of the navel.

7. Quickening.—In popular language, this term is applied to the mother's perception of the first movements of the fœtus, on the incorrect assumption that it was not alive from the very moment of conception. Quickening may be briefly explained thus:—As soon as the uterus has become too large to remain in

the pelvis, it rises into the abdomen, sometimes suddenly, causing faintness and sickness; after this, the movements of the child, pressing directly upon the sensitive walls of the abdomen, are felt. If any doubt exists as to the date of conception, four months and a half from the date of quickening may be reckoned as a tolerably safe guide to the time of labor.

This sign of pregnancy is by no means a reliable one, unless the movements are certainly felt by another person, as the patient may be deceived by flatus in the intestines, or by the force of her own imagination; for women who think themselves pregnant often assert that they plainly feel the motions of the child, persisting in such statement until the lapse of time convinces them of their error. On the other hand, cases occasionally occur in which no sensation of the motion of the child is perceived by the mother from the beginning to the close of pregnancy.

8. Fluctuation. — As early as the second or third month, pregnancy can often be diagnosed with certainty by this test. The *tactus eruditus*, possessed by the practiced physician alone, is essential to make the test available. Holding the uterus steady with the left hand, an examination with two fingers of the right discovers the *os uteri* closed, the womb more or less enlarged, and by pressure or percussion a sense of fluctuation or perceptible movement of fluid is communicated. The fluctuation is a most important sign, giving reliable evidence in a majority of cases. After the second month the fluctuation is more perceptible, but it may be recognized by the sixth or seventh week by a careful examination.

9. Ballottement. —At the expiration of a few weeks the uterus will be found lower than usual, heavier, and its *os* more circular, and closed; but afterwards it becomes higher, more difficult to be reached, and its neck shortened. If the woman be placed on her knees, and an impulse given to the finger, ballottement, or the floating of the child, may be felt, for it rises a moment in the *liquor amnii*, or fluid in which the fœtus floats, and then, by its own gravity, sinks again on the finger. The most favorable period for this test is between the fifth and sixth months. Before the fifth month the fœtus is too light, and after the sixth month it is too closely packed to admit of this test.

Ballottement is very conclusive of pregnancy, and especially when corroborated by other signs, but determines nothing as to the life of the fœtus.

10. Sounds of the Fœtal Heart.—By applying the stethoscope to the lower portion of the abdomen of either side, usually on the left, about midway between the umbilicus and the anterior superior spinous process of the ilium, the fœtal heart may be heard at twice the rate of the mother's. The sound has been compared to the muffled ticking of a watch, and the earliest time it can be heard is the beginning of the fifth month. When the pulsations of the fœtal heart are heard, they are the most positive of all the signs of pregnancy. At the same time, the pulsations may be inaudible, and yet the woman may be *enceinte*, as the fœtus may have died, or the pulsations may be rendered inaudible only for a time.

It is by these pulsations that the sex of the child can in a large proportion of cases be ascertained during gestation. When the fœtal pulsations reach 144 per minute, the child is probably a female, but when they are 124 per minute, probably a male. Any little variation from 124 upwards, and from 144 downwards, will not alter the diagnosis, provided auscultation be practiced towards the end of pregnancy.

11. Other Signs of Pregnancy, which we can here only enumerate, are—change of color of the mucous membrane of the vagina to a dusky, livid hue, often well marked, and very characteristic; salivation; the uterine souffle, caused by the rush of blood through the tortuous arteries of the uterus over the placenta; sharpness of the features; irritability of temper; and, frequently, toothache, and other nervous complaints. Lastly, a frequent desire to pass water, especially in the night, is another early and valuable sign.

From the foregoing statements the reader will perceive that the diagnosis of pregnancy, especially in the early months, is far from being certain; the evidence is cumulative, no one sign being alone trustworthy, probability rising in proportion to the accumulation of the signs. Errors in the diagnosis of pregnancy usually arise from the attention of the observer being restricted to one or two signs only, and omitting to inquire for other corroborative ones.

General Habits During Pregnancy.

1. Diet.—The diet should be simple, nutritious, and easy of digestion; it should be thoroughly masticated, and but little fluid should be drunk at meal-times, especially cold, since cold retards digestion. It is an error to suppose that women require more nourishment in pregnancy than at other times, and large quantities of rich food, taken in the belief that it will contribute to the sustenance of the child, cannot but be productive of baneful consequences. Spices, spiced meat, sausages, and all highly-seasoned food, and late suppers, must be refrained from. Plainly-cooked animal food (once a day), well-boiled vegetables, ripe fruits, and such articles as rice, tapioca, arrowroot, will, if taken in moderation, rarely disagree with the stomach. Pie-crusts, smoked hams, salted meats generally, rich sauces, and every article that has been known to occasion indigestion, must be eschewed. All substances that have a tendency to produce a costive state of the bowels should be especially avoided, and, unless some reason exist to the contrary, brown bread should be eaten in preference to white. Stimulating drinks—wines, ardent spirits, ale, porter, strong tea and coffee—are, generally, hurtful both to the mother and the fœtus.

2. Dress. — It would seem scarcely necessary to make any remarks upon the dress to be worn, were it not that some women, considerably advanced in pregnancy, often lace tightly for the sake of attending public entertainments, or of diverting notice from their condition. At no time should stays be worn, for the simple reason that they are never required. But they should especially be avoided during pregnancy, since a continual and forcible compression of the abdomen while nature is at work to secure its gradual enlargement in order to accommodate the growth of the fœtus, must be attended with serious injury to the health of both mother and child. During gestation, the uterus increases on an average from two to fourteen inches in diameter. It will be obvious, therefore, how vain, as well as criminal, must be any effort to contract it, and thus to conceal its enlargement. Palpitation of the heart, indigestion, disease of the liver, and costiveness; difficulty of breathing, spitting of blood, and per-

sistent coughs; enlarged veins in the legs, swellings in the lower limbs, disorders of the womb, deformity of the offspring, and numerous other affections, have their origin in tight lacing; and, finally, if the child be born alive and moulded aright, and the mother escape her self-created perils, it may be questioned if compressed breasts and nipples can afford the requisite aliment.

The dress should be arranged, both as to material and quantity, with the view to comfort and to the season. There must be no pressure on any part; even the garters should be loosely worn. The feet and abdomen should be kept warm, since habitual coldness of these parts predisposes to colic, headache, and Miscarriage.

3. Exercise.—Exercise is a most important means of retaining good health during gestation, of securing a natural delivery, and of favoring the health of the infant. Walking in the open air is a most useful kind; for this calls into action more of the muscles of the body than does any other exercise suited to this condition. Walking-exercise is even more necessary in the winter than in the summer, and produces a much healthier and more lasting warmth than sitting before a fire. It should, if possible, be taken in the morning before dinner, and be of such a character as to interest the mind as well as to strengthen the body. This will operate most favorably as a preventive of a host of the morbid conditions and feelings which are apt to attend this state. Care must, however, be taken to avoid such a degree of exercise as may induce positive fatigue; such as too long walks, going out in slippery weather, dancing, lifting heavy weights, and all kinds of violent motion, which are liable to cause hæmorrhage, Miscarriage, and bearing-down of the womb. The passive exercise of riding in a carriage falls short of the object in view; and, on the other hand, riding on horseback exceeds it, besides the danger of fright and accident to which the incipient mother is then liable. In very wet or windy weather, or when it is impracticable to walk out, she should select a large and well-ventilated room, so that the air she breathes may be pure.

4. Additional Hints.—Theaters, balls, brilliantly-lighted, or other exciting public meetings should not be attended; early habits should be formed; all excessive mental emotions, as grief, despondency, anger, and the like, are to be guarded against; the

cold or tepid bath should be used daily, following it with vigorous friction; the mind should be kept tranquil, remembering that parturition is not necessarily attended by great suffering, or imminent danger, these being, in most instances, the penalty inflicted on those who disregard the hints laid down in this Section.

CHAPTER V.

DISORDERS OF PREGNANCY.

These disorders we take in the following order—those which affect the nervous, the circulatory, the digestive, the urinary, and generative systems. According to this arrangement, the first on our list is,—

Melancholy, Fear, Etc.

Fear, anger, joy, grief, and other emotional disturbances, operate powerfully upon the heightened susceptibility of the pregnant state, and unless moderated or removed may affect both the mother and child unfavorably. A morbid dread, causing the sufferer to view events through a darkened and distorted medium, is liable to produce trembling of the body, weakness of the limbs, alarming dreams, nightmare, nervous irritability, leading her to despair of life, and even to wish that it were extinct. Injudicious friends often aggravate this morbid state, by recounting accidents and unpropitious results of pregnancy which probably never occurred. Such thoughtlessness cannot be too strongly condemned. The statements are almost always untrue, but they may appear so real to the patient as to operate powerfully on her mind, and thus produce the most serious results.

Treatment.—*Cimicifuga.*—Melancholic depression, jealousy, nervous weakness, weariness, and restlessness; sleeplessness, or sleep with distressing dreams; pains in the left side, under the breast, in the back, etc.

Ignatia.—Inconstant, irresolute, impatient disposition; alternate sadness and gayety; depression of spirits, the patient frequently weeping without cause; acute sensitiveness; sensation as of a ball rising in the throat, and other hysteric symptoms.

Platina.—Extreme depression, even to the fear of death, with anguish about the heart, Hysteria, etc.

Pulsatilla. — Weeping mood, headache, heartburn, uneasy feeling at the pit of the stomach, and oppression of the mind by numerous cares.

Acon., Sep., Hyos., Cham., Opi., or Coff. may also be required in some cases.

Accessory Means.—Useful occupation, combined with suitable out-of-door recreation or games; cheerful company or books; change of air and scene, or easy journeys to favorite or novel places of interest.

Fainting and Hysterical Fits.

These are not frequent accompaniments of pregnancy except at the period of quickening, and in weakly and delicate females. The fits are far from being serious, except when associated with organic disease of the heart. If they occur toward the end of pregnancy, they may render convalescence after parturition more tedious than it would otherwise be. They are also unpleasant occurrences at the time of labor.

Symptoms.—These differ from epileptic fits, as there is no choking noise in the throat, or biting of the tongue. There is a sensation of languor, with disposition to yawn; things appear to turn round; the sight becomes dim, the face pale, and there is buzzing or ringing in the ears; the patient sighs and becomes partially insensible.

Causes.—Heightened impressionability of the nervous system from dibilitating causes, as Neuralgia, prolonged sleeplessness, Diarrhœa or other discharges; anger or fright. Tight dresses, crowded and badly ventilated sitting-rooms, churches, theatres, ball-rooms, etc., are frequent exciting causes. When fainting occurs soon after labor, it may arise from hæmorrhage, and requires prompt and skillful treatment. (See "Flooding after Delivery.")

Treatment.—*Camphor.*—May be administered during a fit, either by olfaction, or by giving two drops of the strong tincture on a small piece of loaf sugar.

China.—Faintness from exercise, profuse losses of blood, Diarrhœa, perspiration, etc.

Digitalis. — This alone is sufficient to restore the patient if the fainting be attended with feebleness of the heart.

Iodium.—For the const tutional debility, of which the tendency to faint is a symptom.

Moschus may be administered during a fit, either by giving two drops of a dilution in a teaspoonful of water, or by olfaction, a bottle of the tincture being held to the nose.

Opium.—When fainting has been brought on by fright.

Ver.-Vir., Cham., Ign., Puls., Cimic., etc., are suited to the hysterical fits, in certain conditions.

Administration.—During a fit, a dose every ten or fifteen minutes; afterward, every four or eight hours.

Accessory Means.—During a hysteric fit, cold water may be dashed on the face. For a simple fainting fit, the patient should be laid down, with the head and shoulders slightly raised, abundance of air admitted to the room, and quiet maintained. Camphor, Eau-de-Cologne, Moschus, salts of Ammonia, etc., may be applied to the nostrils. If the extremities are cold, artificial warmth may be necessary. The exciting cause must, as far as possible, be removed; when this is a tight dress, or a too hot or badly-ventilated room, removal of the cause is generally sufficient. If fainting arises from constitutional conditions, professional treatment is necessary.

Headache, Dizziness, etc.

These are sometimes most distressing concomitants of pregnancy. There may be acute congestion, with throbbing, dimness of sight, confusion of ideas, and great heat of the head and face, with dizziness, intolerance of light and sound, etc. Or the face may be pale, cool, and the eyes heavy and languid. There may be also a feeling of weight on the top of the head or back of the neck, palpitation, nervous tremblings, a disposition to fall forward, variable or diminished appetite, gastric derangements, etc.

Treatment.—*Aconitum.*—Giddiness on rising from a recumbent posture, heavy, oppressive pains on the top of the head or in the forehead, redness of the eyes, dry burning skin, hard frequent pulse, scanty urine, etc. Especially suitable for florid patients of nervous temperament.

Belladonna.—Violent congestive headaches, with staggering, buzzing in the ears, throbbing of the arteries of the temples and neck, scarlet redness of the face, sparks before the eyes, pains in the orbits, double vision, confusion of ideas, intolerance of light, etc. The symptoms are worse in the morning, and there is disinclination to move.

Bryonia.—Beating in the forehead, giddiness, sense of weight and fullness, as if the brain would press through the forehead on stooping. This headache is often accompanied by indigestion, constipation, sometimes bleeding from the nose, rheumatic pains, etc.

Cimicifuga.—Nervous, hysterical headache; pulsative; severe aching pain in the eyeballs; pressure in the occipital region from within outward; absence of gastric disturbance.

Gelsemium.—Headache with feverishness; heat of the face and body; intermittent pulse, strong palpitation; oppression of the chest.

Glonoine.—Throbbing of the arteries of the head; dizziness; sensation of a tight band around the head; full, rapid pulse; cutting, jerking, maddening pain; hot, injected eyes, with flashes of light.

Nux Vomica.—Congestive headache, waking the patient early in the morning, worse after eating, aching as if the head would split, stupefaction, etc., often associated with constipation, nausea, etc., sometimes commencing with dazzling of the sight, and increased by coughing or stooping. Nux Vom. is especially suited to headache from over-eating, or too late eating at night, from alcoholic beverages, or from sedentary habits.

Puls., Ign., Ipec., Iris, Cocc., Sep., Plat., etc., may also be considered.

Accessory Means.—In congestive headache the feet should be kept warm, and when cold, hot applications should be made to them. In headache from gastric derangements, free vomiting

often gives relief; to promote which, if necessary, a tumbler of warm water with a teaspoonful of mustard mixed in it may be taken. In neuralgic headache dry hot flannels around the head, or a handkerchief tied tightly, is often palliative. If the feet are cold, a hot brick or bottle should be applied.

Preventive Treatment.—Early hours, to obviate as far as possible the use of artificial light, heated rooms, etc.; the cold bath, with plenty of friction, in a well-ventilated room, every morning on rising; regular daily open-air recreation; domestic duties and anxieties should only be permitted to exercise a moderate influence, the patient aiming to live a tranquil and agreeable life; regularity or moderation in eating and drinking, avoiding eating in a hurry, taking suppers, stimulating food and drinks, especially spirits, strong tea, coffee, etc. The regular function of the bowels should be promoted by observing the directions in the Section on "Constipation."

Toothache or Faceache.

The toothache of pregnancy is a Neuralgia, from which some women begin to suffer soon after conception, and even recognize their condition by this symptom. It is, however, liable to happen at any period during pregnancy. The pain may attack one or more decayed or not quite sound teeth, or it may extend along the jaw without affecting any tooth in particular. It is sometimes so intense as to render the patient temporarily delirious. Extraction of teeth is seldom advisable, as homœopathic treatment will generally remove the pain. A qualified dentist, indeed, usually refuses to remove them for this cause, where it exists alone. Besides, patients of refined nervous sensibility, or who have a tendency to Miscarriage, are in danger of abortion from the fear or shock of extraction.

Treatment.—*Aconitum.*—Toothache from exposure to cold or wet, with throbbing of the gums and cheek, febrile symptoms, and aggravation of the pains by stimulants.

Belladonna.—Toothache with determination to the head, and great nervous irritability; the pains increase at night, are throbbing or piercing, and often occur in alternation with intense headache.

Chamomilla.—Faceache with swelling, irritability, heat and redness, especially of one side of the face, flushes, palpitation, and sensitiveness to external impressions, the pain being worse at night.

Coffea.—Extreme sensitiveness to pain, sleeplessness, flushed face, great restlessness; the pain is relieved by cold water, and may be accompanied by palpitation, recurring every night.

Kreasotum.—Toothache from decayed teeth; it not only relieves the pain, but also tends to arrest the progress of the decay.

Mercurius.—Pains in decayed teeth, extending into the head; toothache from cold with swelling of the glands; threatened gumboils. This remedy has been, perhaps, more frequently and successfully used in domestic practice than any other.

Additional Remedies which may be used both during the attacks, and also during the intervals:— Bry., Calc.-C., Cim., Nux V., Puls., Sep., Staph.

Administration.—A dose every fifteen, thirty, or sixty minutes, according to the severity of the attack.

Accessory Means.—Avoidance of cold and damp; improvement of the general health, especially of the digestive organs, should be promoted by the use of wholesome food, pure air, out-of-door exercise, bathing, and regular, early habits.

Palpitation of the Heart.

Weakly, nervous ladies often suffer from attacks of palpitation. By some it is experienced immediately after conception, by others at the period of quickening, by others, again, toward the end of pregnancy.

Causes.—Increased sensibility and irritability of the nervous system, consequent on pregnancy; in the later months, plethora may act as a predisposing cause; the movements of the fœtus, indigestion, the excessive use of tea and coffee, mental emotions, etc., may also excite palpitation.

Treatment.—*Aconitum.*—When the palpitation is connected with a plethoric condition, or derangement of any of the important organs of the body, or is brought on by fright or excitement.

Belladonna.—Is useful in cases very similar to the ones calling

for Acon. Headache, with redness of the face and dimness of vision, would indicate this remedy.

Cactus Grand.—Nervous palpitation, whether recent or chronic; especially with a sensation of fullness at the heart, suffocation, and general plethora; heart appears to whirl round, or to be tightly grasped.

Digitalis.—Great irregularity in the heart's action, sometimes rapid, sometimes almost entirely suspended; inability to walk or lie down; great distress.

Moschus.—Nervous palpitation, with a tendency to faint.

Nux Vomica.—This medicine is of great value when the palpitation is apparently due to indigestion. It is especially indicated in patients of a dark complexion and irritable disposition.

Pulsatilla.—Like the preceding medicine, Pulsatilla is useful in cases arising from indigestion, but in light-haired women, of mild, easy disposition.

Additional Remedies. — Camph., Cham., Cin., Coff., Ign., Sep., Ver.-V.

Administration. — A dose every thirty or sixty minutes during an attack; in the intervals, thrice daily.

Accessory Means. — Derangements of the digestive organs, mental anxiety, excitement, heated rooms, and confinement within doors, should be guarded against.

Varicose Veins.

Definition. — This frequent accompaniment of pregnancy consists of a dilatation of the veins, especially of the lower limbs, and sometimes of the vagina, so that the veins stand out like knotted cords, with more or less swelling of the adjacent parts, and often rendering sufficient walking exercise impossible.

Symptoms.—The enlarged veins are most frequent on the leg below the knee, but the veins of the thigh are also liable to be involved, and in some cases those of the labia majora, vagina, and even of the *os uteri*. Both limbs may be equally affected, but when the womb is more inclined to one side than the other, the corresponding limb will be most affected. Sometimes the foot becomes quite purple from the congestion of the minute vessels, and the veins in the thigh and leg acquire an enormous size.

The veins get larger when the patient is much on her feet, or allows the limb to hang down, but diminish during rest in the horizontal posture.

Cause.—Pressure of the enlarged womb upon the *iliac* and inferior *cava*, and so obstructing the return of blood from the parts below. It is most frequent when the uterus is too low, when the person is very heavy, and in those who have borne many children. As the derangement is caused by the pressure consequent on pregnancy, after delivery the veins soon regain their former size.

Treatment.—*Aconitum.*—This medicine has no specific action upon varicosis, but is often indicated when inflammation has been set up in the veins, as an intercurrent remedy.

Hamamelis.—In severe cases, and when bleeding is threatened. A dose every eight or twelve hours. The local use of this remedy is also sometimes necessary. Generally, Ham. is the best remedy.

Nux Vomica.—Varices, with enlargement of the abdomen, hæmorrhoids, constipation, and frequent bearing-down pains.

Pulsatilla. — Painful and inflamed veins of a bluish color, causing swelling of the limbs, in patients having the Puls. temperament.

Accessory Means.—The limb should be bandaged from the toes to a little above the knee, or to the hip if the disease extends above the knee; beneath this bandage compresses of linen should be laid over the enlarged veins, and kept wet with Ham. lotion (one part of the strong tincture to four of water); or the affected parts may be bathed with the lotion morning and night. All ligatures, such as garters, must be removed. Rest in the recumbent posture, or the limb raised as much as possible, is necessary. Sometimes an elastic stocking, made to measure, and drawn on like an ordinary stocking, before rising in the morning, is requisite.

Swelling of the Lower Extremities.

In advanced pregnancy women often suffer from a puffy swelling of the ankles, and sometimes of the thighs, or even of the external genital parts. Change of posture has great influence upon the swelling of the legs; in the morning it is but

slightly perceptible, but during the day it increases, and toward night it is at its greatest degree.

Treatment.—*Apis Mellifica.*—Rapid and extreme swelling, with urinary difficulties.

Arsenicum.—Œdema with much debility, weakness, and prostration; feeble and irregular pulse, and coldness of the extremities.

China. — Dropsical swellings from exhausting discharges, hæmorrhages, diarrhœa, etc.

Ferrum. — Œdema depending on an anæmic or chlorotic condition.

Sulphur.—When the patient has been subject to affections of the skin, which have disappeared during the pregnancy.

Administration.—A dose three or four times daily.

Accessory Means.—The recumbent posture will often lessen the inconvenience; and when the patient sits she should do so as much as possible with the legs raised. Standing is more unfavorable than a moderate degree of walking exercise.

Pains in the Back and Loins.

Many women suffer from pains in the lower part of the back during pregnancy. The pains are usually aching, heavy dragging, or pressing, as if caused by a weight. They are often more severe during the night than during the day.

Treatment.—*Arnica.*—Is indicated if the pain can be traced to fatigue or over-exertion.

Bryonia.—May be employed if the patient be subject to rheumatism.

Nux V.—Is an excellent remedy in cases attended with flatulence, constipation, and piles, the pains being worse in bed.

Secale.—Bearing-down sensations in the lower part of the abdomen, with pain in the back.

Sepia.—Useful when the patient has been long subject to menstrual derangements, or has a sallow, unhealthy-looking skin, and is subject to piles.

Accessory Treatment.—Sponging the loins with hot water for a few minutes before going to bed is sometimes of great efficacy, especially in cases associated with rheumatism or over-

fatigue. In almost all cases a well-fitting, thin flannel bandage is desirable.

Sleeplessness.

Sleeplessness is a prominent and annoying symptom in some women in all stages of pregnancy.

Treatment.—*Aconitum.*—The presence of any febrile symptoms would indicate the employment of this medicine.

Coffæa.—When the sleeplessness occurs in the early part of the night.

Nux Vomica.—Sleeplessness chiefly in the morning, with flatulence and constipation.

Veratrum Album.—If the sleeplessness be caused by cramps.

Accessory Treatment.—When the sleeplessness occurs in the early part of the night the patient should sponge her face and neck with hot water, or, if this fail, she should apply a cold water compress to the nape of the neck, just before going to bed. Similar measures may be adopted if the sleeplessness manifests itself in the early morning.

Morning Sickness.

In the early months of pregnancy, most women experience more or less of this; occasionally nausea or vomiting, or both, are very troublesome and persistent symptoms, and give rise to serious concern as to the patient's health, especially in the first pregnancy of delicate women.

Symptoms.—The first intimation of it generally occurs on rising from bed. Before getting up the patient may feel as well as usual, but while dressing will be overtaken by nausea, followed by retching, and perhaps by vomiting. Or it may not occur until some little time after leaving the apartment, or not till after breakfast, which may be eaten with zest. In some cases, sickness is not felt till the evening, when its habitual return indicates one of the forms of displacement (prolapse or retroversion) of the womb incident to pregnancy. Morning Sickness may begin almost immediately after conception, of which it is often one of the earliest symptoms; but more frequently it does not commence until after the lapse of two or three weeks, and then continues

more or less constantly and severely for three or four weeks, and in some instances till near the time of quickening, or even until confinement. In some rare instances it does not occur before the last weeks of pregnancy, and is then apt to be severe; in other cases it is altogether absent during the whole period of gestation.

Cause.—The increased action of the nerve-force employed in digestion to furnish material for enlarged growth, carried to so high a degree as to disturb the equilibrium of the digestive and assimilative forces. It is most common amongst the wealthy and inactive. Moderate Morning Sickness is no doubt salutary by diminishing that tendency to plethora or too great fullness in the system which often attends pregnancy. Uterine displacements are known to produce Morning Sickness, and it is more than possible that the slight prolapsus of the womb which is incident to the first months of gestation may help to account for it. (*Ludlam.*) When sickness is invariably brought on or intensified during the latter part of the day or in the evening, after the patient has been upon her feet, it is due to displacement or prolapse; this is proved by the prompt relief that follows the replacement of the organ on the patient's taking the horizontal posture. Obstinate and long-continued nausea or vomiting is generally caused by congestion, ulceration, or displacement, or it may arise from hyperæsthesia of the nervous system, and require professional treatment. Nausea and sickness occurring towards night are more serious and obstinate, for the reasons already mentioned.

Treatment.—*Arsenicum.*—Vomiting after eating or drinking; persistent vomiting, with extreme weakness and emaciation.

Ipecacuanha.—Great uneasiness about the stomach; vomiting of undigested food, bile, or phlegm, relaxed bowels. Often sufficient in mild, uncomplicated cases.

Kreasotum.—Persistent Morning Sickness from sympathetic disturbance. This remedy rarely fails.

Nux Vomica.—Vomiting with vertigo, restlessness, and irritability of temper; waterbrash, hiccough, sense of weight at the pit of the stomach, constipation, etc. Suitable for women of dark complexion.

Pulsatilla.—Fair persons; tendency to diarrhœa.

Veratrum.—Excessive sensibility of the nerves of the stomach, vomiting being excited by the least quantity of water, by moving, or by sitting up; vomiting with great debility and tendency to diarrhœa; attacks of fainting.

Accessory Means.—The simpler modes of treatment are—cheerfulness, mental composure, moderate out-of-door exercise, and early hours. The regulation of the diet is also important,—a change in the hours of eating to those in which the stomach is least likely to be disordered, especially avoiding over-repletion. Cold food will sometimes be retained when hot is rejected. In some cases two or three teaspoonfuls of beef-tea, frequently repeated, or soda-water and milk, or when these cannot be borne, small pieces of ice may be sucked. In extreme cases, it may be necessary to give up the attempt of feeding by the mouth, and to depend upon injections by the rectum for a day or two.

Raw Beef in the Vomiting of Pregnancy.—Cases are recorded in which raw beef has been retained after every other kind of food had been rejected. It was chopped fine, with a little cayenne pepper and salt sprinkled over it, and given in teaspoonful doses at intervals of three hours. Although the idea of eating raw beef was repulsive, upon tasting it, it was not found disagreeable. Scraped beef is even more easily digested. It may be prepared as follows:—Take a piece of steak cut like a little block, scrape the surface with a silver spoon until all the pulp is extracted, then cut a slice off the steak, and scrape the newly-cut surface again. It may be taken with currant jelly, or spread as a sandwich between bread, with a sprinkling of salt and pepper. [Oxalate of Cerium is also a valuable remedy in this complaint.]

Heartburn, Waterbrash, and Acidity.

These complaints often occur during gestation, and may be generally traced to taking more food than the stomach can digest, frequently from the mistaken idea that the patient now requires more food than at any other time.

Symptoms.—A burning sensation up the throat, and sometimes spasm of the stomach, generally with frequent eructations of an acid or tasteless watery fluid, when it is termed Waterbrash or Pyrosis.

Treatment.—*Calcarea Carb.*—Obstinate acid eructations.

Carbo Veg.—Acid, acrid eructations, with flatulence, rumbling in the abdomen, burning heat in the stomach, the hot air sometimes rising to the throat, causing a sense of suffocation.

Nux Vomica.—This remedy is generally efficient, and should be administered three or four times daily as long as improvement continues. It is especially indicated when there exist headache, spasm in the throat, constipation, and loss of appetite.

Pulsatilla.—Patients of a mild, timid disposition, with a tendency to diarrhœa; dislike of food, especially of fat; eructations tasting of food; perverted taste, or taste as of putrid meat; inclination to vomit.

Sulphuric Acid.—Chronic Acidity. Our allopathic brethren have now found out that acidity is better treated by acids than by alkalies.

Accessory Means.—The diet should be restricted, avoiding a too exclusive use of vegetables, all pastry, fatty kinds of food, stews, twice-cooked meats, hot buttered-toast, new bread, raw or half-cooked vegetables, and everything that is rich and indigestible, must be forbidden. Bread termed aerated bread is best for patients troubled with Heartburn. Plain biscuits are also valuable. Drink should be taken sparingly with the meals.

Cramps.

Pregnant women are liable to cramps or irregular pains in the abdomen, loins, calves of the legs, and feet, especially about the fourth and fifth months, and towards the end of gestation, which are due to changes in the uterine and abdominal structures from the growth of the fœtus.

Treatment.—*Arnica.*—Cramps from fatigue.

Colocynth.—Is indicated when the cramps are followed by stiffness and soreness of the parts.

Nux Vomica.—When there is considerable numbness of the limbs, as if they would "go to sleep," and with symptoms of indigestion.

Veratrum Album.—This is a most efficacious remedy, especially if cold be the cause; but it is useful in most cases of the cramps of pregnancy.

Accessory Treatment.—Brisk friction to the legs morning and evening, and also while the cramps are on, will often afford much relief. At all times the feet and legs should be kept dry and warm.

Colic.

Spasm, from flatulent distention of the bowels, is apt to occur during pregnancy, owing to cold or improper diet. It generally affects the large intestines.

Treatment.—*Chamomilla.*—Colic associated with relaxation of the bowels, tearing pains around the navel, impatience and irritability.

Colocynthis. — This remedy is suited to paroxysmal colic, attended with cutting, griping, or intermittent pains, diarrhœa, and to severe as well as mild forms of the disease. Distended abdomen.

Dioscorea.—This remedy is much esteemed by many practitioners as suitable for bilious colic.

Nux Vomica.—Spasmodic, flatulent colic, with constipation, or alternate constipation and relaxation; from over-indulgence in food; and from fatigue.

Plumbum.—Colic with constipation, especially in elderly persons; constrictive shooting or pinching pains in the region of the navel.

Veratrum Album. — Severe crampy pains, with or without diarrhœa, if accompanied by vomiting of bilious matter. This remedy has been preceded by Hyos. with advantage.

Accessory Means. — During the violent pains of colic hot applications are useful, but a warm bath is objectionable for colic during pregnancy. A pint or a pint and a half of tepid water, boldly injected up the bowel by an enema-syringe, with a long pipe, and repeated if necessary, is almost invariably and immediately successful, especially when the wind is in the lower part of the abdomen. Indigestible food should be avoided, especially pastry, vegetables and uncooked or unripe fruits, and no food should be taken within at least three hours of going to bed. Persons liable to colic should wear a piece of flannel around the abdomen in cold or changeable weather, and keep the feet warm

and dry. Daily exercise in the open air should be taken, and worry and excessive mental fatigue avoided.

Salivation.

A profuse flow of saliva occasionally takes the place of morning sickness, and is generally most troublesome in the earlier months of gestation; it is sometimes the earliest sign of that condition.

Symptoms.—In the morning the patient finds her mouth and throat filled with tenacious mucus of saliva, which is ejected in roundish masses. When salivation is excessive it is a cause of exhaustion.

Treatment.—*Mercurius.*—This remedy is generally homœopathic to this condition, and may be administered three or four times daily.

Iris, Iod., Ac.-Sulph., K.-Chlor., etc., are sometimes required.

Accessory Means.—Nitric Acid, Chlorate of Potash, or Alum gargles are often beneficial. As a mere palliative, holding a small piece of gum-arabic in the mouth is recommended. The chewing of coffee berries has been known to cure when all other remedies have failed.

Constipation.

Constipation is a frequent attendant on pregnancy, especially in ladies who live in towns and lead a sedentary life. Although constipation is generally less injurious than a too relaxed state of the bowels, it may occasion many inconveniences, and should be remedied as far as possible by such means as the following.

Causes.—Constipation in pregnancy is generally referred to the pressure of the enlarged womb upon the bowels; but it is often due to torpor of the bowels, consequent on the increased action of the womb diverting nervous and vascular forces from adjacent organs. Neglect of sufficient out-of-door exercise, and indolent habits, for which pregnancy is supposed to be a justification, may also give rise to constipation.

Treatment. — *Bryonia.* — Constipation from torpor of the bowels, especially in warm weather, with determination to the head, irascibility, etc.

Collinsonia.—Constipation with Piles, especially if associated with uterine disorders.

Hydrastis Canadensis.—Simple Constipation, from torpidity of the bowels.

Nux Vomica.—Indigestion, with a sensation as if the lower bowel were closed, and frequent ineffectual urging to stool, flatulence, and Piles. It is specially indicated in persons of a hasty, vehement disposition, and when too little out-of-door exercise is taken. In chronic Constipation it may be alternated with Sulph., giving Sulph. in the morning and Nux V. in the evening.

Sulphur.—In chronic cases a short preliminary course of Sulph. is generally advantageous.

Accessory Means.—Daily out-of-door exercise; a tumbler of fresh spring water taken either on going to bed or on rising; the sparing use of animal food, the free use of vegetables, ripe or preserved fruits, brown bread, oatmeal porridge, etc., also the hip-bath. When the bowels remain for many days unmoved, and there is uneasiness in consequence, an enema of tepid water, or soap-suds, may be had recourse to. In using the enema several points should be carefully observed—that the rectum-tube be well greased, that the instrument be emptied of air before insertion, that the injection proceed slowly, that if pain be occasioned the injection be suspended till it is gone and then renewed, and that the slow injection be continued till there is an urgent desire to evacuate. A wash-hand basin full of water may be required; a small quantity may suffice. If only a small quantity can be retained, and no result follow, the injection should be repeated after a little while. The appropriate medicine need not be discontinued on this account, for, although the bowels are moved by this mechanical assistance, their torpidity still remains to be cured. The wet compress for the abdomen, described in the Section on "Piles," is also a most valuable adjunct. In some cases a small suppository of soap will ensure a comfortable action of the bowels in an hour.

Incontinence of Urine.

The bladder is frequently affected during pregnancy; in the early months by the descent of the womb, causing a frequent and

painful desire to urinate, which, if not immediately yielded to, may result in an involuntary discharge, especially when the patient has a cough. In many cases this condition is very distressing; the constant discharge excoriates the parts more or less, so that the patient can only move about with pain; whilst at the same time an offensive urinous odour is exhaled from the person.

Treatment. — *Belladonna.* — Relaxation of the neck of the bladder, with inability to retain the urine. The emissions are copious, frequent and watery, or yellow and turbid.

Cannabis Sat. — Involuntary emission, from irritation of gravel.

Cantharis.—Irritation of the bladder, with irresistible desire to urinate, and only a few drops of scalding, acrid urine passed at a time.

Cina.—Frequent desire, and passage of turbid urine, which may occur involuntarily in bed, from the irritation of worms.

Pulsatilla. — Incontinence in feeble, sensitive, and timid patients. There is frequent desire to urinate, with spasmodic pains in the neck of the bladder, and watery urine. A dose every four hours.

Nux Vomica.—This remedy is useful in females of an opposite temperament with similar symptoms.

Accessory Means.—The bladder should be trained to retain water during the day, though evacuation should not be too long postponed. All salt, acid, and pungent articles of food, malt liquors, spirits, tea and coffee, should be avoided. Meat should be eaten with moderation; fruits, especially uncooked, taken sparingly; flatulent food eschewed. Nothing hot should be taken in the latter part of the day. Cold water (soft is preferable), toast-and-water, mucilaginous drinks, milk-and-water, and cocoa, are the most suitable beverages. Abstinence from fluids is not desirable, as rather tending to increase the acridity of the urine, which may be lessened by mucilaginous drinks. Local cold ablutions are strengthening.

Retention of Urine.

This, the opposite condition to Incontinence, may arise from pressure of the distended uterus, or from displacement of the

neck of the womb causing obstruction of the urethra. It requires prompt attention, as the pressure of the over-distended bladder upon the uterus may occasion serious inconvenience.

Treatment.— *Aconitum.* — Retention, with inflammatory symptoms.

Belladonna.—Retention, with congestion to the head, redness of the face, etc. Either of the last two remedies may be alternated with or precede Cantharis.

Camphor. — Sudden spasmodic retention, with burning and great pain. It is chiefly useful at the commencement of the difficulty, and when but little fever exists. Coldness and shivering are further indications for this remedy. It is best administered on loaf sugar, two drops every ten or fifteen minutes for three or four times.

Cantharis.—Urging to urinate, with cutting and tearing pains.

Nux Vomica. — Painful ineffectual desire to urinate, with discharge drop-by-drop, especially in persons accustomed to alcoholic beverages. This remedy often enables the bladder to recover its contractile power.

Administration.—Except the tincture of Camphor, a dose every one to four hours, according to the urgency of the symptoms.

Accessory Means in Urinary Difficulties. — The patient should make regular efforts to pass water; and if she fail in her endeavors, a single introduction of the catheter will generally remove the difficulty. Often, however, the use of the catheter is entirely superseded by one or more of the medicines just recommended, or even by the following measures. The sudden application of a towel to the abdomen, after immersion in cold water, often causes an immediate contraction of the bladder, and consequent discharge of urine. Sometimes the alternate application of a hot and cold towel is speedily successful. Even plunging the hands into a full basin of very cold water, and moving them about, is generally followed by an immediate discharge of urine. Fomentations, and injections of water up the bowel or vagina, afford great relief, and often supersede the use of the catheter. The diet must be sparing, and, in severe cases, restricted to gruel and demulcent drinks—barley-water, gum-water, linseed-tea, or

simple cold water. Tea and coffee should be taken very sparingly, or altogether omitted for a time. A change of the drinking water is often advisable, especially if pure soft water can be obtained. Acids, and too much salt, should be avoided.

Pain in the Breasts.

Some patients are troubled with a pricking or acute pain in one or both breasts; the pain may become exceedingly troublesome, constant, or recur in paroxysms; generally there is no fever, although excessive suffering may cause sleeplessness and want of appetite: like faceache and headache, this is generally of a neuralgic character.

Causes.—Sympathetic irritation in the breasts, through pregnancy, which determines a flow of blood to those organs; compression of the breasts with stays, etc. It is especially liable to occur in women who have suffered from painful menstruation. As a symptom, pain or tension of the breasts may result from tumor in the womb, ovarian dropsy, etc., as well as from pregnancy.

Treatment. — *Aconitum.* — Febrile symptoms, especially if arising from cold.

Belladonna.—Erysipelatous redness, heat, hardness, or other inflammatory conditions.

Bryonia.—Pricking sensation, sensitiveness, etc.

Conium is also sometimes required for the nervous variety.

Pulsatilla will generally remove this condition when it is chiefly nervous.

Administration.—A dose three or four times daily for several days.

Accessory Means.—Hamamelis and Olive-oil (one part of the former to ten of the latter), gently rubbed into the breasts, often affords quick relief. Chloroform (one part) and Glycerine (twenty parts) make another useful application. Tight-fitting dresses should be avoided.

Itching of the Genital Parts.

Symptoms.—Pruritus of the vulvæ is often one of the most distressing ailments to which pregnant woman are liable. It consist in an intolerable itching of the vulvæ (external genitals),

sometimes without any abnormal appearances except such as arise from the violent rubbing which the irritation excites; in other cases an aphthous efflorescence, similar to the Thrush of infants, encrusts the inner surface of the labia and adjacent parts, and may extend to a considerable depth towards the womb. In other cases, again, the aphthous condition is not present, but the parts take on a copper-colored appearance, and present numerous slight abrasions, with excessive irritation. From the surfaces thus affected a vitiated watery exudation takes place, together with the most intense and incessant itching. Sometimes this affection is accompanied by sexual excitement—or it may have a periodic character. It is not limited to pregnancy, and sometimes troubles the unmarried of all ages; it is most common, however, during gestation, and at the change of life.

Causes.—Acrid fluids from the glands of the vulvæ or vagina; any conditions leading to congestion of the generative organs, as inactive habits, too much sitting, especially when combined with too high living or the use of stimulants; at times it is owing to an aphthous form of inflammation of the mucous membrane of the vagina, and may co-exist with the sore mouth which sometimes accompanies pregnancy or lactation. Worms or Pediculi may occasion the irritation. A want of proper cleanliness also is, no doubt, an occasional cause. Taking opium, or hydrate of chloral, has caused it. Disorders of the digestive organs—Constipation, Piles, etc.—are frequently associated with this condition. It is especially liable to occur in ladies who have suffered from Leucorrhœa or urinary troubles.

Treatment.—*Arsenicum.*—Chronic eczematous Pruritus.

Borax.—This remedy has often great power over this affection, and should be used internally, and as a wash.

Conium.—Itching and soreness of the parts from acrid milky Leucorrhœa.

Graphites.—Itching with excoriations or vesicles. It should be administered internally and as a wash.

Kreasote.—Pruritus with fœtid corrosive Leucorrhœa.

Mercurius.—Aphthous or eczematous Pruritus.

Platina.—Pruritus associated with ovarian or uterine disorder.

Sepia.—Inflammation and swelling of the vulvæ; Leucorrhœa, with bearing-down and excoriation of the parts.

Administration.—A dose three or four times daily.

Carbolic Acid, diluted Tincture of Iron, infusion of Hops (1 oz. of the drug to 1 quart of boiling water), and Flowers of Sulphur, have all proved efficient, in different hands, as local applications.

Accessory Means.—Local treatment is generally necessary. Frequent and thorough ablutions of the external parts with tepid or cold water are very desirable for the comfort of the patient, and at the same time conducive to her recovery. A wash of castile soap and warm water is often very useful. The hip-bath, used several times daily during an attack, and persevered in afterwards once a day, will be found very efficient in aiding the cure, and in preventing this troublesome affection. Temporary relief may be obtained by a solution of borax in water, applied two or three times a day to the parts. Sulpho-carbolate of zinc (one drachm to an ounce of water) may be applied twice daily, and often gives much relief. A tablespoonful of Eau de Cologne mixed in a teacupful of warm water, and applied directly by means of cloths saturated with the mixture, is another valuable application. [Sedative Saxoline will prove efficacious.]

Abortion—Miscarriage.

When the expulsion of the fœtus occurs in the early months of pregnancy it is termed Abortion, or Miscarriage; after about the seventh month, Premature birth. In the former—Abortion or Miscarriage—the child is not *viable* (capable of an independent existence); in the latter—Premature birth—it is. When Abortion has once occurred, a predisposition to it is engendered in subsequent pregnancies, and especially at about the corresponding period; consequently indiscretions and excesses are more likely to be fatal to natural delivery at this particular time than at any other. Abortion must be regarded as a serious evil; it not only deprives the mother of the product of her pregnancy, but often places her health, and even life, in peril.

Symptoms.—(1) *Slight symptoms of Miscarriage.*—A feeling of indisposition to exertion, depression, weakness and uneasiness at the bottom of the back and at the lower part of the abdomen,

and other symptoms resembling those which often precede menstruation.

(2) *Symptoms directly threatening Miscarriage.*—Slight and increasing discharge of blood; cutting pains in the loins and abdomen, recurring in paroxysms, and with increasing intensity.

(3) *Miscarriage.*—Pains, at first slight and irregular, now become severe, and recur at regular intervals, with bearing-down, watery discharges, and expulsion of the fœtus.

Causes.—The predisposing causes are—feebleness of constitution; too slight an attachment of the embryo to the womb during the early part of pregnancy; profuse menstruation; too great rigidity of the walls of the womb, which opposes the due expansion of the organ; a relaxed condition of the uterus or of its neck; long-continued Leucorrhœa; excessive sexual indulgence; acute diseases, particularly those of the uterus and abdominal viscera; exposure to malignant forms of disease—Small-pox, Scarlatina, Diphtheria, etc.; want of sufficient healthy exercise; late hours, as in nursing the sick, especially if combined with anxiety and unrelieved by daily recreation in the open air.

The most frequent exciting causes are the following: Overreaching, as in hanging a picture; falls and blows; taking a false step in going up or down stairs; lifting heavy weights; long walks; horseback exercise, or riding in carriages over rough roads; climbing steep or difficult steps; dancing; excessive use of the sewing machine; late hours; tight garments, especially such as exert undue compression upon the abdomen; indigestible food; acute diseases and inflammatory affections of the womb or adjacent organs; purgatives, especially such as operate directly upon the uterus; violent mental emotions, as in care, anger, grief, fright, etc. Also all circumstances which immediately or remotely excite abnormal contractions of the uterus. The causes just enumerated are not usually followed by Miscarriage; indeed, muscular efforts, moderately and regularly performed, are favorable to gestation. The danger arises in women who ordinarily take but little exercise, either in or out of doors, but who under excitement or the stimulus of unusual circumstances do an amount or kind of work and perform feats which result in the mischief under consideration. Abortion, again, is more likely to arise from the above causes when

a predisposition to it already exists, more especially at the end of the third month, or at the period corresponding to that at which it previously occurred. But the most powerful exciting cause is the recurrence of the time when, but for pregnancy, menstruation would have taken place, for at this period Abortion is a hundred times more likely to occur than at any other time. To those who have aborted, therefore, the return of what would have been the monthly period is always a critical event.

Treatment.—*Aconitum.*—In full-blooded patients with strong, quick pulse. If indicated, this remedy may be alternated with another.

Chamomilla.—Extreme sensitiveness to the pains, with nervousness and irritability; threatened Miscarriage consequent on anger, fright, or other strong emotion.

Crocus.—Profuse discharge of darkish clotted blood.

Hamamelis.—Discharge of blood without pain.

Ipecacuanha.—Flooding of bright-red blood, with nausea and tendency to faintness. Also useful in preventing Miscarriage when the patient first experiences pressure downwards, sickness, coldness, and after any discharge of blood.

Nux Vom.—Constipation attended with straining.

Sabina.—Abortion with a sense of heat and soreness in the womb, especially at about the third or fourth month, even if labor pains and a red discharge have set in.

Secale.—Severe, forcing, bearing-down pains like those of labor, with no discharge, or with excessive dark discharge; and when the patient has previously suffered from painful menstruation; also after Miscarriage. Dr. Dalziel informs us that when decided hemorrhage is present he uses the ordinary Tinct. Sec., in ten-drop doses every three or four hours, and thus checks severe hemorrhage, pregnancy going on to the full term.

Viburnum Op.—This will prevent miscarriage, if given before the membranes are injured, and when the pains are spasmodic.

Administration.—In cases of threatened miscarriage, a dose every fifteen, thirty, or sixty minutes, according to the urgency of the symptoms; as these abate, once in two to four hours.

Accessory Means.—Immediately after a patient has had the least "show," she should lie down in a cool, well-ventilated room,

on a sofa or hair mattress, and maintain the posture till all symptoms of miscarriage have disappeared. Merely resting the legs and feet is quite insufficient. In cases, however, in which miscarriage is only apprehended, it is not necessary to restrict the patient wholly to the recumbent posture; gentle and moderate out-of-door exercise is necessary, as entire rest weakens the constitution and augments any existing predisposition. Sexual intercourse must be avoided; also, coffee, tea, and other kinds of hot drink that occasion flushings, excitement, etc.; also the circumstances tending to produce abortion, as detailed under "Causes."

After Miscarriage.—When miscarriage has actually occurred, the immediate after-treatment should be the same as pointed out under "Labor." The patient should be kept in bed, and in every respect the same care observed as if she had gone through labor in due course. If the patient leaves her bed and goes about household duties before the womb has had sufficient rest and time to return to its unimpregnated size, displacement, subinvolution, prolapse, and subsequent abortions are likely to occur. Abortion and miscarriage, more frequently than natural parturition, are followed by defective uterine involution; and this is because the menstrual discharge is brought on too soon by the resumption of the duties and pleasures of life. The uncontracted womb is thus likely to become permanently over-sensitive and congested, and this condition may merge into inflammation in weakly-constituted women. (See Section on "Profuse Menstruation.")

Preventive Remedies.—Where a predisposition to miscarriage exists, one of the following remedies should be administered as soon as the person is known to be pregnant, and continued once or twice daily for two or three months:—Caulophyllum, Cimicifuga, Helonias, Pulsatilla, Sabina, or Secale, according to the local symptoms present. When the general health is at fault constitutional remedies are necessary.

Calcarea.—Patients of a strumous condition.

Helonias.—General anæmic symptoms.

Sepia.—Previous irregular or scanty menstruation; affections of the skin; sick headaches, etc.

General Preventive Measures.—Every attention should be directed toward maintaining as vigorous a state of constitution as

possible. The diet should be good and liberal, but within the limits indicated in the Section on "General Habits During Pregnancy." Open-air exercise should be taken for two or three hours a day, if it can be borne without fatigue. For the bed, a hair mattress over a feather bed is the most suitable; and cold or tepid sponging should be practiced every morning, both in summer and winter. Sometimes a tepid hip-bath should be conjoined with the sponging. The patient should sit in the bath, about half filled with water, for three or four minutes on rising in the morning. Whilst in the bath the water should be dashed over the stomach and back, with the hand or by means of a sponge. After the bath, the body should be rubbed with a large towel or sheet until reaction is thoroughly established. When there are threatenings of Miscarriage, the patient must strictly confine herself to the recumbent posture, even for weeks should it be necessary; and especially after Miscarriage has taken place must she retain that posture, as if pregnancy had gone on to full term. The uterus must have a period of rest, which is as necessary after Miscarriage as after an ordinary labor. Especial care and rest are necessary whenever the monthly period comes round. If this last precaution were fully acted upon, it would suffice to break what is termed the habit of aborting. In some cases Abortion can only be prevented by a separation of the husband and wife for some months, during which time efforts should be made to reduce the uterus to its natural size and condition. (See Section on "Sub-involution.") Together with the rest of the body here recommended, a quiet and tranquil state of mind should, as far as possible, be maintained.

CHAPTER VI.

LABOR.

Calculation of the Time of Labor.

The following table will be especially valuable to the newly-married lady, who, through delicacy, might hesitate to seek advice on this important and interesting subject. Much time may be saved, often great anxiety avoided, and timely medical and other attendants secured, by ability to approximate in reckoning to the hour of solicitude and hope.

The period of pregnancy, from conception till confinement, is calculated at ten lunar months, or forty weeks, which amount to 280 days. It is sometimes reckoned at nine calendar months, that is, 273 days, or 39 weeks; probably, however, forty weeks is the safer reckoning. Gestation is occasionally protracted beyond 280 days. Cases are recorded in which labor has been delayed 10, 20, or even 30 days beyond the usual period, but such cases are very rare. When the date of conception is known, the reckoning begins from that day. If that be not known, then the calculation must commence from the last monthly period. If the time of the last monthly course cannot be remembered, then that of quickening, or when the movements of the child are first perceived, must be made use of. Although sexual connection may not be confined to any period of the month, yet it is an old observation, confirmed by the experience of modern accoucheurs, that conception is more likely to occur within a few days before or after the menstrual flux than at other times.

Patients who make use of the annexed table should remember that the period of pregnancy is slightly altered by the age of the parties concerned; the fact being clearly proved that the younger

THE DURATION OF PREGNANCY.

PREPARED BY W. W. ELY, M. D.

EXPLANATION.—Find in the upper horizontal row the date of last menstruation; the figure beneath will show the expiration of 280 days, reckoning from the first day of last menstruation.
In leap year it will be one day earlier.

Jan. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oct. -	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	*Nov.*
Feb. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	34	25	26	27	28				
Nov. -	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5				*Dec.*
March	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Dec.	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	*Jan.*
April -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Jan. -	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4		*Feb.*
May -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Feb. -	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	1	2	3	4	5	6	7	*March.*
June -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
March	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		*April.*
July -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
April -	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	*May.*
Aug. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
May -	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	*June.*
Sept. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
June -	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7		*July.*
Oct. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
July -	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	*Aug.*
Nov. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
Aug. -	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6		*Sept.*
Dec. -	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Sept. -	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	*Oct.*

the husband and wife, the shorter the term of utero-gestation; and *vice versa*, as age increases, the term of gestation is proportionally lengthened.

Difficult Labor.

Many of the sufferings attendant upon parturition arise from those habits of life which it is the object of this work to expose and to guard against, such as—diet of an improper quality or quantity; the use of stimulating beverages; want of sufficient pure air and healthy exercise; tight lacing; late hours; and other injurious habits. Amongst savage tribes, childbearing is comparatively free from the sufferings which too frequently attend it in an artificial state of society. Even in our country, healthy women, of regular habits, accustomed to out-of-door exercise, and whose general mode of life is natural, are freed from the long train of miseries which are the too frequent concomitants of childbearing.

At the same time, causes of difficult labor may exist of a more remote nature, and less directly referable to the habits of the patient. Such are—contraction and deformity of the bones of the pelvis, from Rickets, or from a similar disease in adult life; anchylosis of the coccygeal vertebræ to each other and to the sacrum, diminishing nearly an inch the antero-posterior diameter of the outlet of the pelvis, obstruction from tumors, dropsy, the large size of the child, or from a hydrocephalic head; wrong presentation, etc. The management of these cases requires professional knowledge and skill.

Simpler causes of difficult or tedious labors are—a distended bladder, accumulation in the lower bowel; or indigestion from a too full meal, or from food that disagrees, taken just before labor sets in. Prompt treatment suffices at once to remove these obstacles to the progress of labor.

Powerless labor is generally due to constitutional feebleness, as from previous ill-health, too frequent labors, etc. Here, of course, preventive treatment is indicated. This includes nourishing diet, pure air, suitable exercise, and the administration of one or more of the remedies which our now rich Materia Medica offers.

This seems a proper place to make a remark on treatment preparatory to labor in cases about which any difficulty is apprehended. Our pharmacopœia contains remedies which, selected according to the requirements of each case, and administered

once or twice a day for some time prior to parturition, tend to facilitate that process, and even to correct conditions that would otherwise operate as causes of difficulty. Patients for whom we have prescribed during gestation have often told us of the comparative absence of pains and difficulty which they had experienced in previous labors; and these instances are now altogether too numerous to allow of their being regarded as mere coincidences. As far as our observations extend, the difficulties and dangers of parturition are far less under homœopathic than under allopathic treatment; to say the least, they are then reduced to a minimum, and especially when preparatory treatment has been adopted.

Preparations for Labor.

The nurse should be a middle-aged married woman, or a widow; of temperate, kind, and cleanly habits; and free from any defect of sight or hearing. In every respect she should be subordinate to the medical attendant, and faithfully carry out his directions, both as to the mother and infant, as he alone is responsible. Under no pretext should she interfere with the medical treatment, or employ remedies or applications not prescribed by the doctor. If such an arrangement were convenient, the nurse should be selected by the medical man, be engaged early, and, as the whole of her time and the best of her energies are to be devoted to the lady and the infant, she should be liberally remunerated.

If practicable, a spacious, well-ventilated room, having a southern aspect, should be selected. Provision should exist both for the admission of fresh air, and the escape of tainted air. Renewal of the air is generally best secured by occasionally leaving the door ajar, having the fireplace open, and the top sash of the window more or less down, according to the season. Fresh air wonderfully helps a woman to go through the process of parturition. In cold weather a fire may be kept in the room, but neither the mother nor infant should be exposed to its direct influence.

In addition to the medical man and the nurse, one female friend —not the mother of the patient—may likewise be present in the chamber; she should be a prudent, cheerful person, and if herself

the mother of children, so much the better. Remarks calculated to depress the patient, especially any referring to unfavorable labors, are strictly improper. If convenient, the mother of the patient may be in the house, or within a short distance, the knowledge of such fact tending to comfort the patient. But she should not be in the lying-in-chamber, as maternal anxiety is occasionally very embarrassing there. There are, however, occasional exceptions to this rule.

All articles of clothing necessary for the mother and infant should be well aired ready for immediate use, and so arranged that they may be found in an instant. A little fresh, unsalted lard; about twelve inches length of nice twine, or four or five threads; a pair of blunt-ended scissors; a few patent pins; and the binder or bandage. Also a piece of waterproof sheeting, or strong oiled silk, or even a common oilcloth table-cover, should be placed under the blanket and sheet over the right side of the bed, to protect it from being injured by the discharges.

Attention to the action of the bowels is necessary. Generally the bowels are somewhat relaxed—a wise provision of nature, for by thoroughly emptying the bowel more space is gained for the birth of the child. Should, however, the bowels be confined, an injection of from one to two pints of tepid water will be sufficient to empty the intestine, and is far preferable to the common but reprehensible practice of taking castor-oil, or any other aperient drug. Ample experience leads us emphatically to denounce the practice of giving purgatives, as both unnecessary and hurtful. A good injection of water as soon as labor has set in, especially when the lady is costive, will not only facilitate the birth of the child, but obviate the unpleasant occurrence of an escape of fæces during parturition. If there is a considerable collection of hardened fæces, a warm soap-and-water enema may be necessary.

During labor, a woman should never neglect to pass water as often as necessary. The proximity of the bladder to the womb renders it most undesirable that the former should be distended with urine, as nature requires the utmost available space for the passage of the child. Besides, the powerful action of the womb at the commencement of labor may, if the bladder is distended with urine, press it down into the vagina, thus injuring the

bladder, and retarding labor. This caution is especially necessary in first labors, when, from a refined sensibility, women are apt to suffer much inconvenience from inattention to this point. If the bladder is full, and there is inability to pass water, the measures suggested in the section on "Retention of Urine" should be adopted, or, better, the doctor should be informed of the fact. The importance of attention to the state of the bladder during and immediately after labor can scarcely be overrated.

During the precursory stage of labor the patient should not confine herself to bed—not even to her own bedroom, unless she desires it—but walk about a little; a certain amount of unrest leads her from place to place, and it would be most undesirable to confine her to her bed. A change of position is a good preventive or remedy for cramp of the legs and thighs, which occasionally comes on, more especially when she is restricted to one posture. If medicine be necessary to remove this symptom, Cocc., Puls., or Ver.-Vir. may be administered.

False Labor Pains.

Towards the close of gestation, women are apt to suffer from pains which may be mistaken for those of labor, but which are of a perfectly distinct character.

Diagnosis. — The following table exhibits the difference between true and false pains:—

TRUE PAINS.	FALSE PAINS.
1. Come on and go off regularly, gradually increasing in frequency and severity.	1. Are irregular in their recurrence, or, in some instances, are unremitting.
2. Are situated in the back and loins.	2. Are chiefly confined to the abdomen.
3. Are grinding or bearing-down, according to the stage of labor.	3. Are of a colicky nature.
4. Arise from the contraction of the uterus, and the resistance made to its efforts, and the mouth of the womb may be felt dilated at each pain.	4. Are caused by cold, flatulence, indigestion, spasm, fatigue, etc., and have no effect upon the mouth of the womb, which is found closed.
5. Are usually attended with a "show."	5. Are unattended with a "show."

Treatment.—*Aconitum.*—Pains in young plethoric persons, with febrile symptoms.

Bryonia.—Dragging pains in the loins, increased by movement, and attended with constipation and much irritability.

Caulophyllum.—There is no remedy, says Dr. Hale, upon which we can rely with more confidence than this one. It is equally efficacious when the pains are spasmodically or continuously bearing down.

Nux Vomica.—Dragging pains in the abdomen and back, as if from a bruise, and attended with constipation, flatulence, and irritability in persons of dark complexions and lively temperament.

Pulsatilla.—Symptoms similar to the ones under Nux, but in women of a mild, gentle disposition, and fair complexion.

Administration.—In severe cases, a dose every twenty to forty minutes; in mild or tedious cases, every three or four hours.

Symptoms and Stages of Labor.

The earliest is a diminution of the waist, from sinking of the child lower down in the abdomen. This subsidence of the womb gives the lady a feeling of lightness and comfort; pressure on the thoracic region being removed, she breathes more freely, and is better able to take exercise. But occasionally this alteration in the position of the womb leads to irritability of the bladder by its pressure on that organ, giving rise to a frequent desire to urinate. After this symptom has existed a few days, or even in some cases only a few hours, the more immediate symptoms of labor occur; these are—agitation, dejection of spirits, flying pains, frequent inclination to relieve the bladder and the bowels, relaxation of the external parts, and a slight discharge of mucus tinged with red, technically called the "show." This latter is the most certain indication that labor has really commenced.

At this stage, sometimes shivering and sickness come on; but, as they are not unfavorable symptoms, they require no particular treatment, certainly not brandy, for their removal.

Labor has been divided into three stages. The first, in which the uterus alone acts, commences with uterine contractions, the pains being of a grinding character; the *os uteri* (mouth of the womb) gradually dilates until it is sufficiently capacious to admit the passage of the head of the child. In this stage it is not necessary for the lady to confine herself to bed; she is better

walking about the room, occasionally lying down when a pain comes on. She should not on any account bear-down, as some ignorant nurses advise; for before the mouth of the womb is sufficiently dilated, the child could not be born, except by rupture of the womb.

The second stage of labor is indicated by the pains being of a forcing, bearing-down nature; the abdominal muscles and the diaphragm assist the action of the uterus, acting in an involuntary and reflex manner; this stage terminates with the birth of the child. In this stage the lady should remain on the bed. Even now she should make no voluntary efforts to bear-down, especially in the absence of pain; she should keep her eyes closed, to prevent injury to them during the irresistible straining which attends the expulsive pains.

The third stage includes the expulsion of the placenta, which generally takes place in about fifteen or twenty minutes, or it may be a little longer, after the birth of the child.

It has been laid down as a general rule, that a first labor continues six hours, and a subsequent one three hours. This calculation dates from the commencement of actual labor; if the premonitory flying pains are included, the time would probably be doubled. The first labor of a woman who marries beyond the age of thirty usually occupies a longer time than one who marries at about the age previously indicated.

In previous editions we have remarked that tedious labors are, as a rule, natural, and by no means necessarily dangerous. But this tediousness must be within certain limits—from three to six hours. If greatly prolonged beyond this, labor may be attended with danger to both mother and child. When the labor is likely to be prolonged, the mother is more likely to do well if the vectis or forceps be used early. Sir James Simpson and other careful obstetricians affirm that the mortality of mother and child is greater in labors prolonged beyond thirty-six hours than those which terminate within twenty-four. If the head be well placed and the *os* well dilated without mechanical obstruction, slow labor with weak pains may be terminated at once. Convulsions call for immediate interposition, and if the os be not sufficiently dilated, mechanical dilatation may be adopted until the forceps

can be introduced. If courage be failing, and the sufferer be impatient, the instrument should be used, in case the nervous system be unstrung by the strain. Although it is undesirable to interfere with the operations of nature, the practitioner is present to aid nature; and prompt assistance may avert much agony and save many lives. In the hands of a man of ordinary intelligence and skill the vectis and forceps are perfectly safe, and attended with no more danger of laceration than natural labor.

Treatment.—So long as labor is progressing naturally and satisfactorily, the less it is interfered with in any way, so much the better will it be for the patient's comfort and recovery.

Aconitum.—Feverishness, palpitation, etc.

Belladonna.—Flushed face, throbbing headache, confusion of ideas; a tendency to wander may occur; or there may be convulsive movements, sensitiveness to noise, light, etc.

Caulophyllum.—As a uterine excitant.

Cimicifuga. — Spasmodic, painful, too violent, intermitting pains, sometimes with cramps in the limbs, and a tendency to general convulsions; also nervous irritability and dejection.

Coffea.—Excessively violent pains, with restlessness and great mental depression and nervous excitement.

Gelsemium.—To produce relaxation of a rigid, unyielding *os uteri* in labor, this remedy, in from one to five drops of the strong tincture, every half-hour, is probably superior to any other.

Pulsatilla.—Irregularity, uncertain and fitful pains, confined chiefly to the back.

Secale.—Too weak pains, and when they seem to be declining.

Administration. — A dose every fifteen, twenty, or thirty minutes, as required. If no relief follows the third dose, another medicine may be chosen.

Accessory Means. — When the pains are flagging, friction, with moderate, well-directed pressure over the abdomen, often stimulates the womb to increased activity. The pressure should be exerted until the placenta is detached.

Chloroform in Labor. — A natural labor is best, and its attendant pains should be patiently borne, especially when all is going on well. Chloroform is probably less frequently used now than it was a few years ago; still, with proper precautions, it is

often a great blessing to those who are undergoing the "perils of childbirth." It may slightly retard parturition by somewhat weakening, or rendering less frequent, uterine contractions; still, a woman may be delivered naturally under its influence. It is unattended with danger to the child, nor is it liable on the part of the mother to occasion hæmorrhage, or tend to the production of Puerperal Mania. The pulse and the respiration furnish reliable indications as to the extent to which it may be carried, and the length of time the inhalation may be continued. When requested by a patient to administer it, and no objection to its use exists, the author never hesitates to do so. It should not, however, be administered except by the sanction and under the care of a qualified medical man. It may be given by pouring a sufficient quantity into a tumbler, and letting the patient inhale it in small doses, well diluted with atmospheric air, and when the stomach is empty. One or two minutes' inhalation is generally necessary to effect a sensible diminution of the pain; its administration should be commenced when the dilating pains of the first stage of labor are past, and have been succeeded by the forcing, expulsive pains of the second stage. It should be inhaled just as a pain comes on, and be discontinued directly it goes off, or ceases to be felt. Unless during instrumental delivery, the patient need not be made entirely unconscious by it. Talking in the room should not be allowed while she is inhaling the chloroform. Her head should not be raised, and she should not be allowed to sit up in bed for some hours after its administration.

How to Act in the Absence of a Physician.

Some labors are managed entirely by nurses who have had some preliminary training in a lying-in hospital, where also, perhaps, a short course of lectures has been delivered; but women generally prefer a qualified physician, in whose care, firmness and superior ability they have greater confidence. Inasmuch, however, as labor sometimes comes on earlier than was anticipated, or its stages are gone through with so rapidly as not to give sufficient time for the attendance of a physician, it is desirable to know how to act till he arrives. Calmness, judgment, self-possession, and attention to the following points, are generally all

that is necessary in ordinary cases for the safety and comfort of the woman and infant, at least until the arrival of the accoucheur.

If, when the head is born, the face gets black, the exit of the shoulders should be aided by slight traction, by means of the index finger inserted in the *axilla* (armpit); but on no account should the head be pulled, for dislocation of the neck might result. After this the remaining exit of the body and *nates* (buttocks) should not be hurried.

When the child is born, the nurse should at once remove it out of the way of the mother's discharges, place it where it has room to breathe, and see that the mouth is not covered with clothes. The mouth should also be examined, and any mucus in it removed. At the same time it is very important to notice whether a coil of the *funis* (navel string) be tight round the infant's neck; and if so, to instantly liberate it to prevent strangulation. If there are two or three coils, they should be loosened a little to allow the child to breathe.

The ligature—a piece of twine, or four or five threads—should be placed about two inches from the body of the infant, and tied firmly by a double knot round the umbilical cord; two or three inches farther from the body of the child a second ligature has to be similarly applied, and the cord then cut between the two ligatures with a pair of blunt-pointed scissors. The cord should not be ligatured till the child has given signs of life, by its cries or vigorous breathing, or until all pulsation in the cord has ceased.

The umbilical cord having been ligatured and divided, no attempt should be made, by pulling at it, or otherwise, to remove the *placenta* (afterbirth). The only justifiable interference is firm pressure and occasional friction over the region of the womb, which tends to encourage contraction of that organ, by which means detachment and expulsion of the placenta is effected. We may judge whether the placenta is detached by examining over the lower part of the abdomen; and if the womb is felt contracting, and hard like a cricket-ball, the placenta is detached. A professional correspondent—Dr. Ussher—writes: "There is one very decided way of knowing when the placenta is detached; it is as follows: Grasp the cord in the hand and squeeze it; if pulsation is felt, separation is not complete. For this purpose, one

finger is not enough, the thrill is best felt through all." If the placenta be not expelled, it is in the vagina (passage to the womb); two fingers may then be passed up to the insertion of the cord, where the placenta may be grasped and brought away steadily and evenly, with a spiral movement, but without using force. The spiral movement tends to overcome the pressure of the atmosphere, and also winds the membranes into a kind of rope, so that they are less likely to be torn. It is by no means necessary to wait for a griping pain or two to effect the expulsion of the afterbirth. Indeed the removal is better effected before the griping pains come on.

The binder may be made of strong linen or sheeting about twelve inches wide and a yard and a half long, so as to include the whole of the abdomen, and overlap a little. It should be applied moderately firm, secured by patent pins, and readjusted as soon as it becomes loose. The binder is useful in two respects: it favors contraction of the uterus, and thus tends to obviate hæmorrhage; it also aids the return of the abdomen to its former size, and prevents the condition called "pendulous belly." The binder should be kept on for a week or ten days. It is only proper to add that physicians are not agreed as to the necessity of the binder, for while some always apply it, others discard it entirely. As, however, it can scarcely do harm, if properly applied, and may prevent hæmorrhage or uterine displacement, we recommend its application before the patient is left.

The first few hours after the birth of the child should be essentially hours of repose. For an hour, at least, the patient should maintain the same posture as during labor, and be no more disturbed than is necessary to apply the binder, remove the soiled napkins, and render her as comfortable as the circumstances will permit. She may not on any account make the slightest exertion herself, or hæmorrhage is very liable to occur. One or two hours after labor the tendency to hæmorrhage is much reduced. A cup of hot tea, or a little warm arrowroot or gruel, may be given her, but, except in extreme cases, or under the advice of a physician, no brandy or other stimulant should be permitted. If the patient desires to pass water soon after labor, she should do so in a lying posture, but on no account sit up for

that purpose, as dangerous hæmorrhage might thus be occasioned. By good management and quietude for two or three hours, a little sound and refreshing sleep is usually obtained, and her exhausted energies are soon renewed. After this, should no untoward circumstance forbid, she may be changed and placed in bed, preserving the horizontal posture. As soon as the infant is dressed and the mother is made comfortable, the child should be presented to the breast. By this means the nipple is most likely to assume the proper form, the flow of milk is facilitated, and the activity thus excited in the breasts tends, by reflex action, to promote vigorous uterine contraction, and considerably reduces the danger of secondary hæmorrhage. As suggested in the Section on "Flooding," the nurse should examine the napkins very frequently at first, to ascertain if there be any undue hæmorrhage. The labor being thus completed, the window-blind should be let down, noise shut out, conversation forbidden, and everything done to induce the patient to sleep, at the same time making due provision for good ventilation. As soon as the child is washed and dressed, the nurse only should remain in the room.

Arnica.—In order to anticipate and prevent soreness as much as possible, it is well to administer Arnica internally, especially when the labor has been a hard and protracted one; a few drops of the 1x or 2x dilution, in half a tumbler of water; a dessert-spoonful to be given every hour or two for three or four times. When the afterbirth has been expelled, Arnica may also be applied externally to the parts by wetting a napkin with Arnica lotion (twenty drops of the tincture to a tumbler of warm water), renewing the application as often as may be required. If the patient be liable to Erysipelas, Hamamelis lotion should be used in preference.

Coffœa.—Sleeplessness, nervous excitement, and restlessness.

Aconitum may be substituted for Coffœa, and given in the same manner, should any feverish symptoms occur.

CHAPTER VII.

MANAGEMENT AFTER DELIVERY.

Diet.

Errors on this point have arisen from parturition having been regarded as a disease, rather than a physiological condition. Labor is a process of health, and under ordinary favorable circumstances there is no fever or febrile reaction, or any danger of inflammation; why, then, should a woman be restricted to gruel or low diet for a week? Indeed, under a low diet inflammatory symptoms are liable to be called into existence, and bad matters are more readily absorbed by the uterine vessels. A good diet is the best prophylactic against inflammation. The diet we invariably give is nourishing, digestible, solid food from the very commencement; and we have never seen any untoward results. On the contrary, many women, formerly under the care of doctors who gave only a slop diet, have expressed to us their thankfulness for the earlier and more complete restoration to their former condition, and their exemption from debility and other evils inseparable from a low diet. When a patient is delivered in the night or early morning, and there are no unfavorable symptoms, we allow a mutton chop for dinner on the first day; for other meals, well-made oatmeal-porridge, cocoa or tea, cold-buttered-toast, or bread-and-butter, a breakfast-cupful of arrowroot or gruel, light farinaceous puddings, etc. A too exclusive use of gruel and other slops is apt to disturb the stomach, produce constipation, and retard the necessary changes in the womb.

Flooding.

This is one of the most frequent, and at the same time the most serious, of the accidents which complicate the expulsion of the

afterbirth. The hemorrhage generally comes on with a rush a few minutes after the child is born, and before the placenta is expelled; occasionally it does not come on for several hours, or in rare cases even for several days.

Symptoms.—The blood usually appears externally, which the accoucheur or nurse instantly recognizes, and is sometimes so sudden and abundant as to place the patient in great danger; at other times the discharge is confined to the cavity of the womb, where it may escape detection, or be only recognized when it is difficult or impossible to remedy it. Pallor of the face, small pulse, dimness of vision, noise in the head, and fainting, are symptoms which accompany dangerous hemorrhage, whether the discharge be internal or external.

Treatment.—*Caul.*, *Croc.*, *Ham.*, *Ipec.*, *Sabin.*, *Sec.* The indications for these remedies will be found under "Profuse Menstruation."

Accessory Means.—Immediately the hemorrhage occurs, one hand, previously dipped in cold water, should be placed on the abdomen, to grasp the uterus to stimulate it to contract; at the same time napkins saturated with cold water should be suddenly dashed on the external parts. An enema of ice-cold water will often be effectual. Small lumps of ice, when they are obtainable, may be introduced into the vagina, and carried even into the uterus, or pushed up the rectum, to arrest hemorrhage; at the same time, small pieces of ice, in considerable quantities, should be frequently swallowed. The internal and external employment of ice in this manner will rarely fail to effect early and vigorous contraction of the womb. The patient should remain quite still, the hips being a little elevated, and the pillow removed from her head. On the other hand, the application of heat to the spine by means of spinal bags is very efficacious. Hot-water injections have also been recommended, as exerting a far more energetic action in the tonic contraction of the arterioles, and thus contracting the uterus. The water employed has been at the temperature of 95 deg. to 100 deg. The application of the child to the breast is also useful, as it tends to excite uterine contraction. The patient should be lightly covered, the room kept cool, and a free circulation of air promoted. If the discharge has been alarming

and the patient appears on the point of death, she should have brandy, but slightly diluted with water, in small quantities, at frequent intervals. In this form it is the best stimulus to the heart, and less likely to excite sickness. Beef-tea should be given in small quantities but frequently.

After flooding, the patient is generally inclined to sleep. This tendency should not be interrupted, as sleep wonderfully recruits the exhausted powers. The patient must not, however, be left alone, and frequent examinations should be made by the attendant. In the majority of cases, profuse hemorrhages may be prevented by skillful medical treatment.

Preventive Means.—After delivery the patient should remain in silence, and enjoy the most absolute repose of mind and body for at least half an hour or an hour. A clean and well-aired napkin should be applied to the vagina as soon after delivery as possible, and the nurse strictly enjoined to examine it at least every few minutes at first. In this way any excessive discharge will be easily detected. As before remarked, after the lapse of one or two hours the danger of hemorrhage is much reduced.

After-pains.

Except after a first labor, women generally suffer from after-pains, the nature and intensity of which are much influenced by the character of the labor, and the constitutional peculiarities of the patient. After-pains are liable to increase with each succeeding labor, and unless proper treatment is adopted, the pains may be very excessive, and prevent sleep. Much, however, may be done both in the way of preventing them, and of moderating their violence.

Cause.—*Uterine Contraction.*—After the birth of the child, and the detachment and expulsion of the afterbirth, muscular contractions are still necessary to close the now empty womb, and to reduce that organ to its natural size in the unimpregnated state. This is termed Involution. After-pains are said to be often troublesome in women who have taken chloroform during labor. This may be due to the severity of the pains, or the pains may seem greater from their mitigation during labor. In the latter case, Dr. Ludlam recommends five drops of Chloroform to

be added to half a tumbler of water, and a teaspoonful to be administered as often as the pains recur.

Treatment.—*Arnica.*—Pains following a protracted, hard labor. This remedy may also be used externally. Twenty drops of the strong tincture of Arn. to a teacupful of warm water. A napkin saturated with the lotion should be applied warm over the lower part of the abdomen, and covered with oiled silk or dry flannel to prevent too rapid evaporation.

Belladonna.—After-pains with headache, flushed face, nervousness, and restlessness.

Chamomilla.—After-pains of irritable patients.

Coffœa.—Extreme sensibility, the pains being almost insupportable, with sleeplessness and restlessness.

Gelsemium.—From its remarkable power of diminishing excessive muscular activity, this remedy is recommended. Viburnum covers the same symptoms.

Nux Vomica.—Severe after-pains and the discharge of large firm clots; flatulence.

Sabina.—Intermittent forcing-pains.

Secale.—Continuous forcing after-pains. A high potency is better than a low one.

Xanthoxylum.—This remedy is said to be of inestimable value in after-pains.

The Lochia.

This is a healthy discharge which takes place after delivery, and in color and appearance at first resembles the menstrual discharge. Gradually, however, it becomes lighter, yellowish, and before its final cessation, of a greenish or whitish hue. In a majority of cases the red color changes in about a week to the yellowish shade. It varies considerably in different women, being in some thin and scanty, and continuing only a few days; and in others is so profuse as almost to amount to flooding, and lasting for weeks. The latter is most common in patients who have been troubled with too copious menstruation, who have borne many children, and who have indulged in the pleasures of the table. In some cases, too, this discharge has a disagreeable odor.

Irregularities.—The following deviations from the normal

discharge require medical and hygienic treatment:—A sudden arrest of the lochia; a too prolonged or sanguineous discharge; lochia having a fœtid odor. The latter condition may lead to blood-poisoning.

Treatment.—*Aconitum.*—Too profuse, bright red discharge, with quick pulse, scanty, hot urine, and for plethoric patients. If there is pain from slight pressure over the womb, a strong Acon. lotion, hot, should be applied over the seat of pain.

Belladonna. — Scanty discharge with headache, flushed face, and confusion of ideas; also when the lochia is fœtid, and there are the above symptoms.

Bryonia.—Suppression of the lochia; intense headache, with fullness and heaviness; pain in the breasts; aching in the back; hot, red, and scanty urine.

Hydrastis.—Offensive lochia, with suppressed or scanty discharge.

Pulsatilla.—Simple scanty discharge.

Sabina.—Similar symptoms to those described under Aconitum, minus the febrile ones; also when the red flow continues after it ought to have changed color.

Secale.—Very offensive dark discharge.

Accessory Means.—In suppression of the lochia, flannels wrung out of hot water should be applied to the external parts, and frequently renewed, a second flannel being ready when the first is removed. Also, if necessary, injections of warm infusion of Chamomile flowers. When the discharge is bright, or continues too long, the patient should retain the horizontal posture, be kept quiet, and fed with suitable diet.

Preventives.—After a confinement, ablution of the parts, by means of a soft sponge and warm water, at least twice in every twenty-four hours, the parts being immediately but thoroughly dried, is essential for the health and comfort of the patient, and to prevent the discharge from becoming offensive. The napkins should be frequently changed, and always applied warm, as the application of cold might be followed by an arrest of the lochial discharge. There is no objection in ordinary cases to the patient's sitting up in the chair the day after delivery, while the bed is made. The daily use of the chair favors the discharge of putrid

coagula; and carbolized injections may be employed to aid the evacuation. After the first day the patient may also wash herself, the exertion being helpful rather than otherwise. If the lochia be offensive, the chair should be used more frequently.

Puerperal Convulsions.

Women are liable to convulsions of variable intensity and character before, during, and after labor; but, happily, the affection is one of very rare occurrence.

Causes.—The predisposing causes are hereditary tendency, an excitable temperament, or some previous injury or disease of the head, etc.; and among the exciting causes may be mentioned the irritation produced by a distended rectum or bladder, by the dilation of the orifice of the womb, or by the presence of the child in the maternal passages, etc.

Symptoms.—An attack of convulsions may come on suddenly, without any premonitory warning, or it may be preceded by one or more of the following symptoms: Drowsiness, weight, beating, or pain in the head; heat in the scalp, flushing of the face, or redness of the eyes; numbness of the hands; twitchings of the muscles of the face and limbs; irregular and slow pulse; ringing in the ears; vertigo; pain and oppression in the region of the heart; restlessness, anxiety, etc. The fully-developed convulsions are characterized by unconsciousness; violent spasmodic movements of the muscles of the face, limbs and trunk; swelling of the face; foaming at the mouth; grinding of the teeth; apparently suspended, or short, hurried respiration; involuntary action of the bladder and bowels; profuse cold, clammy sweat, etc. The convulsions may subside in from two to five minutes, leaving the patient in a state of comatose insensibility, or deep, stertorous sleep, from which she may suddenly awake, quite unconscious of what has been the matter, in a quarter of an hour or twenty minutes. No further paroxysm may come on, and the patient may steadily progress toward complete convalescence. Frequently, however, the convulsions recur again and again, at intervals varying from fifteen to thirty minutes, the patient never recovering consciousness from one fit to another.

The alarming character of the symptoms, and the serious

nature of the disease, demand all the skill and coolness of the most accomplished physician to meet the requirements of each case, but pending his arrival much precious time may be saved by the intelligent attendant administering one of the following remedies, and carrying out the recommendations of the accessory treatment.

Treatment.—*Aconitum.*—The presence of fever, with some premonitory symptoms, would be an indication for this medicine.

Belladonna.—This is the most useful and the most frequently indicated remedy, and the only one which need be administered in the majority of cases, both during the convulsions and the intervals.

Hyoscyamus.—If there be much restlessness or anxiety, and a suspicion of approaching convulsions, Hyoscyamus may be given.

Opium.—May be required to remove the dullness and stupor which sometimes remain after the subsidence of the convulsions.

Administration. — For the premonitory symptoms, a dose every half-hour, or oftener. During the convulsions, every three or five minutes, the medicine being dropped between the lips or upon the tongue. After the convulsions, every half-hour, hour, or less frequently.

Accessory Means.—The chamber should be moderately darkened, but freely supplied with cool and fresh air. Warm clothing should be applied to the feet and body, and cold lotions or ice to the head. If necessary, delivery should be accomplished by instrumental means, and the bladder and bowels emptied, but these are matters which must be left to the judgment of the medical attendant.

Milk Fever—Puerperal Ephemera.

When the breasts are first called upon to perform their function, there is sometimes a little circulatory disturbance, which is called the "Milk Fever." This is a normal process, and ordinarily requires nothing but the early application of the child. In severe cases there is the speedy accession of more serious symptoms, which frequently run on into the formidable disease called Puerperal, or Childbed fever. (See next Section.)

Usually Milk Fever is of short duration, consisting of one or

two paroxysms, which occur a few days after childbirth, and attended with diminution of the milk and lochia, but with no local functional or structural disturbance.

It appears about a week after delivery, rarely sooner, sometimes later; prevails in low, humid, marshy districts where the population is sparse, or near stagnant ditches and pools; hence it is malarious in its character.

Symptoms.—Chill, rigors, increased temperature and perspiration; pain in the head, back, and limbs. Pricking sensation in the breasts, which gradually swell and harden. The secretions of milk, urine, and lochia are suspended. The eyes are sunken; the fingers blue; the pulse is feeble and somewhat hurried.

When perspiration breaks out freely, the other secretions are re-established, the patient improves, and the fever passes away.

Treatment.—*Aconitum* may be safely had recourse to when much fever is present, especially at the commencement.

Belladonna should prove useful when, with swelling and pain of the breasts, there is some cerebral disturbance.

Bryonia.—On the subsidence of the febrile symptoms, should there be oppressed and laborious breathing, headache, and constipation.

Phos.-Ac.—Should there remain profuse perspiration after the fever has abated.

Pulsatilla.—This medicine is an excellent one for promoting the establishment of the secretion of milk, especially when the febrile symptoms are attended with considerable muscular rheumatic pains.

Accessory Means.—The patient's chamber should be kept cool and well-aired. All mental excitement or worry should be avoided. The diet should be light, such as gruel, arrowroot, barley-water, sago, etc., and taken in small quantities at a time. So long as the fever lasts the child should not be put to the breasts, but they should be drawn gently by the nurse, either with a breast-pump or otherwise, if full and uneasy.

Puerperal Fever.

This is a continued fever, occurring in childbed, sometimes following neglected Milk Fever, sometimes appearing as an inde-

pendent affection. It is distinguished from Milk Fever in that it is usually attended with peritoneal inflammation, uterine phlebitis, or other local functional and structural disturbances. According to the best authorities, this fever is very fatal, Dr. Ferguson being of opinion that, "with all the resources which medicine at present offers, we shall find that one case in every three will die;" and that "to save two out of three may be termed good practice." When the disease proves fatal, death usually occurs in from one to eight days. The disease is infectious, and has often appeared as an epidemic, attacking any woman who happened to be confined at the time. It is, therefore, no small matter that we have in our Materia Medica remedies which, prescribed according to the law of similars, and given in the early stage, are often sufficient to cure this disease.

Causes.—Instrumental or difficult labors; fœtid lochia; neglect of cleanliness; decomposing fragments of retained placenta; violent emotional disturbances; contagion, or personal transmission of the poison from one patient to another by doctors and nurses. Other animal poisons, as that from Erysipelas, Scarlatina, Typhus, and from the post-mortem or dissecting-room, are capable of exciting Puerperal Fever, as conveyed by the persons and dresses of the attendants of the patients, even after the exercise of great caution. The disease derives great importance, both from its extreme danger and its frightfully contagious character.

Symptoms.—In Puerperal Fever there are rigors (shivering fits), followed by an increase of temperature (rising to 105.6 deg.); more rapid pulse (ranging from 120 to 160); hurried short respiration; distressing thirst; sometimes nausea and vomiting; and distention, pain, and great tenderness over the region of the womb, causing the patient to lie on her back, and draw up her knees to relieve the abdomen from muscular pressure, and from the weight of the bed-clothes; suppression of the milk (if it has been secreted at all); also suppressed, or scanty and fœtid lochial discharge; there are severe pains in the head, flushed face, glistening eyes, anxious countenance, and sometimes delirium; and, unless the disease is checked, typhoid or malignant symptoms rapidly supervene. This fever commonly occurs within a few days after childbirth; and it is remarkable that in most cases the

patient loses all interest in the infant, and even expresses dislike to it and the husband. If the disease be not checked, typhoid or malignant symptoms rapidly supervene. Convalescence is often exceedingly slow.

Treatment.—*Aconitum.* — This remedy should be given as soon as the first indications of fever are noticed. It is usually sufficient in simple Milk Fever, and when there are no symptoms of brain disturbance.

Baptisia.—As the indications of fever become more marked this is preferable to Acon.; and when enteric symptoms supervene Rhus should supersede Bell.

Belladonna.—Congestive headache, flushed face, altered pupils, great restlessness, tossing about, mental distress, and other symptoms of approaching delirium or severe disease. If the lochial discharge is not entirely suppressed, but is fœtid, this remedy is still very suitable. At the same time, Acon. should be continued in alternation with Bell., and at brief intervals, till professional aid can be obtained.

Bryonia.—Distended breasts, oppression, and shooting pains in the chest, etc.

It is not to be expected that a non-professional person will venture to undertake the treatment of such a grave disease as Puerperal Fever, but the intelligent employment of one of the above remedies until the arrival of a physician may be of material importance.

Administration.—A dose every half-hour, hour, or two hours, according to the violence of the symptoms.

Accessory Means.—Frequent small draughts of cold water should be given; this relieves the thirst, and promotes perspiration. Barley, milk, or strong beef-tea between the doses of medicine will help to keep up the patient's strength; even stimulants may be required; brandy rather than chloroform. Hot water will relieve vomiting; but better still is a grain of sulphocarbolate of soda dissolved in half a glass of water; a teaspoonful every few hours. Perfect rest and quiet, with absence of all appearance of excitement or alarm in the attendant, are imperatively necessary. Occasional sponging of the body with tepid water is soothing, and if there is much abdominal distention and

tenderness, a dry heated bran-poultice, in a bag, is the best local application. Repeated fomentations and lavements of the vagina are valuable; indeed, if the parts were sponged with hot water three or four times a day there would be fewer cases of this fever. The napkins should be frequently examined, and all foul discharge effectually cleansed away, and the room disinfected with Carbolic acid. Indeed, when the discharges are offensive, it is well to inject up the vagina some warm water, to which a few drops of Carbolic acid have been added; or as a more agreeable preparation, Chlorate of potash, grs. xij, water ℥j; a dessert-spoonful of this to a teacupful of warm water for injection, or to be applied by wetting compresses with the mixture.

Puerperal Mania.

Gestation, the lying-in-period, and nursing are occasionally complicated by mental derangement, either of a quiet melancholy character, or of a more acute and violent description. The latter is more liable to occur during or immediately after labor, while melancholia, less dangerous to life, but more frequently followed by derangement of the mental faculties, more commonly occurs when the system is drained and exhausted by child-bearing, or prolonged suckling.

Symptoms.—The symptoms of melancholy-mania are generally preceded by signs of exhaustion. There is also an incipient stage, the mind being wrong, but still able to notice its wandering tendency. The memory becomes weak, the spirits depressed, and various fancies haunt the brain. The patient is abstracted, listless, and silent. A conviction of her husband's infidelity, or of her own, coupled with agonizing remorse and contrition, is one of the most common and painful delusions to which this class of patients is a prey; and in numerous instances attempts at suicide result.

Acute mania appears while the patient is sustaining the effects of labor, and occurs suddenly and violently. The face may be pale, and the pulse soft and slow. The manner is agitated and excited, the tongue utters violent and often obscene language, and there is generally a tendency to suicide or child-murder. The bowels are constipated; the tongue thickly furred; the secretion of

urine and milk nearly arrested, and the skin harsh and dry. There may be either disturbed sleep or sleeplessness; also a persistent refusal to take food.

Causes.—This affection scarcely ever occurs except where there is hereditary tendency. The exciting causes are labor, flooding, suppression of the lochia, fright, weakness as a result of prolonged nursing, jaundice, or other disease.

Treatment.—*Belladonna.*—Violent delirium from sudden lochial suppression. Staring eyes, hot skin, suppressed urine, etc.

Cannabis Indica.—Catalepsy; imagines she is the Queen or the Virgin Mary, etc.

China.—Mania following prolonged lactation, or flooding; recurrent headache.

Hyoscyamus.—Jealousy; fits of violence, alternating with moroseness, restlessness in sleep, etc.

Ignatia.—Persistent silent melancholy; tearfulness; obstinacy.

Stramonium.—Violent rage, with constant use of abusive language.

Veratrum Album.—Great anguish of mind, and self-condemnation.

Accessory Means.—The patient should be placed under the care of a humane and experienced nurse, who can be with her night and day; and unless the symptoms are soon amenable to the remedies, the patient should be separated from her family. The diet should be digestible and nourishing, including beef-tea, eggs, milk-and-soda-water; and when there is great prostration, brandy or wine. The food should be given regularly, at short intervals. In acute mania a wet-pack or a hot bath is very advantageous.

The Infant.—If the child is yet unborn, the process of nature cannot be interfered with to any advantage. In Acute Mania, the infant may be allowed the breast again as soon as the symptoms have well subsided. In Melancholia, weaning is at once imperative.

Retention of Urine after Labor.

Retention of urine is not infrequent after parturition, especially after severe and tedious labors.

Accessory Means.—A lady should pass urine within about eight or twelve hours after delivery, or earlier if necessary; she should do this while in a horizontal posture, to prevent flooding, or other serious consequences which might arise from the effort of sitting up to do so. It may be worth while to add, that the *pot de chambre* used by the lying-in-patient should be warmed, or the rim protected with flannel. Should there be a kind of paralytic inability to pass urine, the following simple method may be adopted: Let the nurse pass water in the patient's room, so that she may hear the urine as it passes into the vessel; the sound of the falling stream seems to arouse the dormant nerves of the urinary tract, and their function will generally be quickly restored. Another plan is, to apply a cloth wrung out of hot water to the parts, which often removes the difficulty. Should, however, the inability continue, the medical attendant should be informed of the existing retention, so that if necessary he may draw off the urine by means of a catheter—a measure unattended with pain or exposure. Under any circumstances, should twenty-four hours elapse without the patient passing water, the medical attendant should be made acquainted with the fact.

Constipation after Labor.

It is a natural condition for the bowels to remain unmoved for a few days after delivery. It gives rest to the womb, and to the parts in the neighborhood of the bowel. Instead of injuring, it conserves the strength of the patient, and should on no account be interfered with. In four or five days, however, if the patient has had no evacuation and complains of pain in the bowels, or fullness in the head, one of the following remedies or measures may be adopted.

Treatment.—*Bryonia.*—Pain in the bowels, fullness in the head, etc. Two or three doses, at intervals of three or four hours.

Nux Vomica and *Sulphur* may be given afterwards, if necessary, every four hours, in alternation, for several times.

Collin., Lyc., Op., or Plumb. may be required.

Accessory Means.—The moderate use of plain, unstimulating solid food, at suitable intervals after confinement, will furnish the proper impulse to the intestinal canal, and thus be more likely to

facilitate an evacuation than the exclusive use of liquids. When the action of the bowels is arrested by a collection of hardened fæces in the rectum, an enema of chilled water, or of soap-suds, will almost uniformly suffice to afford complete relief.

Castor-oil, aperient pills, etc., are not required. The author has attended many ladies in their confinements who had previously been under the care of allopathic medical men, and who have assured him that their bowels were never relieved after confinement till Castor-oil had been taken; but he has not, either in these or other cases, ever found it necessary to have recourse to any aperient drug. Good management, suitable diet, and, if the symptoms justified it, the occasional administration of a homœopathic remedy, have in his hands been invariably successful.

Causes of a Bad Getting-up after Labor.

It is no uncommon thing for a patient otherwise healthy to have "a bad getting-up after labor"—that is, to be a longer time than usual in recovering the general condition, which in some cases is not attained for years. There is general debility, manifesting itself in various ways, notwithstanding a fair amount of rest, food, and stimulants; inability to stand or walk a few steps without feeling ready to drop; bearing-down and discomfort in the pelvis; abundant vaginal discharge, perhaps bloody, or mucopurulent, which continues three or four weeks after the birth of the child, and when the lochia ought to have ceased. The most frequent causes are, enlargement, prolapse or displacement of the womb, from taking the erect posture and resuming domestic duties too soon after confinement or Abortion; defective uterine involution, which is the main cause of the displacements that so frequently follow parturition, and the first step to many uterine affections (see next Section), ulceration or bruising of the uterus or its orifices by a severe or protracted labor, or from too violent removal of the placenta; inflammation of the womb, and a typhoid condition due to resorption of a portion of the placenta which is allowed to remain and decompose in the womb. The administration of purgatives and opiates is also a cause of a bad getting-up after labor. The old practice of starvation during the first

few days after delivery is another cause. When, therefore, at the end of four or five weeks after parturition, notwithstanding fair nursing, good food, and stimulants if necessary, the patient continues weak, unable to walk, and suffers from backache, and red, mattery, or fœtid discharge, professional advice should be sought, as grave consequences may result from neglect. A physical examination is generally necessary to discover the true source of the mischief. The wife should sleep away from her husband. A cold water abdominal bandage, tightly applied, will prove palliative. See "Puerperal Fever," "The Lochia," etc.

Involution and Subinvolution of the Womb.

Definition.—Involution is that contractive change which takes place in the womb, after the removal of the fœtus by abortion or delivery, by which it resumes its ordinary size and attains to its usual compactness of tissue.

Subinvolution is the arrest or retardation of the change; so that the womb remains enlarged and heavy, causing considerable distress and suffering.

Pathology.—The virgin womb is about a couple of inches in length and about an ounce in weight. During pregnancy, and according to the growth of the child, it becomes developed in size and increased in weight. Immediately before the expulsion of a full-grown child, the womb is about fourteen inches long, and weighs at least twenty-five ounces. Immediately after the expulsion, the size and weight are very considerably reduced; the size is less than half what it was before, and the weight is similarly diminished. This change is effected by the contraction of the muscular fibres of the uterus, which begins directly after the termination of the labor, which checks the supply and arrests the circulation of blood through the organ. With more or less pain the contraction still steadily proceeds. Meanwhile fatty degeneration and disintegration of tissue, and absorption, aid in the restoration of the organ to its normal state. This, if the process go on with regularity and without interruption, will be attained in the course of five or six weeks, when the compactness of tissue will be regained, and the uterus will measure about three inches in length, and weigh about two ounces. This wonderful contract-

ive and absorptive change is termed involution; if it be incomplete the womb is said to be in a state of imperfect involution, or subinvolution.

Causes.—It may readily be supposed that this process is subject to very easy arrest, and that this arrest may be induced by a variety of causes. A very common cause is the debility of the patient, whose weakness is so great that the uterine contractions are not sufficiently prompt, powerful, and continuous to check the increased supply of blood to the organ when it is no longer required, and thus to lessen the nutrition, which was very necessary before the child was born, but causes hypertrophy when the womb is empty. Another very common cause is the too-early resumption of ordinary employments. Even vigorous, healthy, muscular women, who feel quite well, and somewhat resent the necessity for retaining the recumbent posture, often "get about" too soon. The change of the muscular structure of the womb plainly indicates that rest in bed should be taken for at least a fortnight, and that for several weeks after that there should be frequent recumbency, and a very careful return to active exercise. There is some little danger in the present day, when there is such desire and call for activity, lest in abandoning some of the old-fashioned stifling and weakening customs of a "confinement," the physical necessity for lying down should be ignored. In dispensary practice, where the patients are drawn from the poorer class, who, without attendance and with the claims of a family, are unable or unwilling to submit to restraint after confinement, by far the commonest form of uterine disease is subinvolution of the uterus, with its attendant evils of displacement, and chronic catarrhal conditions of the mucous membrane. Other causes of the evil are inflammation within the pelvis, in any of its varieties; too-early return to marital intercourse, and too frequent sexual indulgence, whereby the womb and its appendages are too soon and too much excited. It should also be observed that if the process of involution be arrested, the return of the menses will have a tendency to confirm the arrest, and, by the monthly congestion, causing increase of size and weight, to produce permanent enlargement.

There is one error which we are here solicitous to correct,

namely, the supposition that it is not so necessary to retain the recumbent posture after abortion as after delivery at full term. Now, involution is as natural and necessary a process in the one case as in the other; and subinvolution may follow abortion, even in the early months of pregnancy, as well as at full term; indeed, it is thought to be much more likely to occur in the former case than in the latter. This is probably because the womb has not reached that normal condition which provides for the contraction of its muscular fibres.

Symptoms.—A feeling of weight, with more or less bearing-down of the womb, and a tendency to excessive and too frequent menstruation, the severity of the symptoms being in proportion to the extent of the enlargement. But the excessive menstruation is the most troublesome, distressing, and alarming effect and symptom of subinvolution. This is explained by the fact that the relaxed state of the muscular tissue favors the exudation of blood, and that there is an undue amount of blood in the congested uterine veins. The profuse flow is not always immediate,—even months may elapse before it occurs; but after a while it is experienced, and examination proves that there is enlargement of the uterus, due to subinvolution. In the intervals between the periods there is frequently profuse Leucorrhœa; and other attendant symptoms are, debility, great pain in the back, irritability of the bladder, straining, and tenesmus. Granular ulceration of the *os* and *cervix uteri* may also accompany subinvolution.

Treatment.—*Caulophyllum.*—This remedy is often of great value in subinvolution: it brings on regular uterine contractions, which are followed by great diminution of the womb; it also checks flooding, and other consequences of subinvolution. The 1x tinct. is recommended, two drops thrice daily for ten to fourteen days, or longer if necessary.

Kali Hydriod., *Sep.*, *Liq.-Sod.-Chlor.*, *Calc.-C.*, *Sulph.*, or other remedy specially suited to particular cases, may be necessary.

Accessory Means.—The various causes that have been in operation to produce the condition, as already enumerated, must be avoided. Rest, in the recumbent posture, is indispensable. Temporary separation from the husband's bed generally leads to great improvement, and if combined with other measures, and

continued long enough, may lead to complete restoration. In many cases the health of both husband and wife needs careful supervision. See also the preceding Section, and that on "Profuse Menstruation."

The New-born Infant.

The weight of the new-born infant varies from 6½ to 9 pounds. Boys weigh a little more than girls, and the infants of women who have already borne children also generally weigh a little more than first infants. Other circumstances influencing the weight are the height of the parents, their constitution, and the accidents of pregnancy. Feeble and lymphatic women, suffering from Anæmia or Chlorosis, and marrying delicate and spare men, have children which do not weigh more than 4½ to 7 pounds. Strong and vigorous subjects may, on the other hand, give birth to very heavy infants, causing difficult labor. Frequent and abundant vomitings in pregnancy may give rise to great diminution in the weight of the infant; thus a woman of habitual good health, who suffered much from this cause, produced a child weighing only 5½ pounds. Scrofula and Syphilis also may reduce the weight; the latter especially, if it does not cause the death of the infant at an early period. Hemorrhage occurring during pregnancy, when not very considerable or frequent, does not exert any appreciable influence on the weight; but when it is very abundant, the infant may lose two or three pounds.

New-born infants, with few exceptions, lose weight during the first days of their existence. But in general after the third day the weight again increases until it rapidly recovers the original amount. Loss of weight may be occasioned by debility at birth in children who are born prematurely or so small that they have not the strength to drink or suck; or by Jaundice, which is so common in infants, and which impedes nutrition. The various forms of accidental infantile disease, by retarding the progress of nutrition and assimilation, may also give rise to loss of weight, which, if prolonged, may endanger life. To these causes may be added imperfect lactation, due either to the bad quality of the milk or ill-formed nipples. The infant does not get enough milk, and sleeps at the breast instead of sucking; and if it is not

weighed before and after sucking, it may be thought to have sucked, while it has really taken little or nothing, and may perish of inanition.

After the infant has passed the period of the early degrees of weight, its increase should be progressive, and where this is not so the nurse should be changed. As long as the child sucks vigorously without sleeping at the breast, and increases daily during the first seven months, the nursing is satisfactory. If it loses weight, or remains stationary, a change is called for. This can only be determined accurately by a weekly weighing. In case of illness of the mother or nurse, when this is only slight and temporary, there is no need of interference; but when it is prolonged, and of a nature to affect the milk, change is necessary. Whenever such a change has been determined upon, if a wet-nurse be employed, she should not be informed of it until the moment when the substitution of the new one can be put in force

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CHAPTER VIII.

LACTATION.

The Function of the Breasts.

The doctrine cannot be too strongly enforced that every healthy mother should nurse her own offspring. The reasons for this may be inferred from the constitution of the female organization, and from the fact that no preparation of food can ever form any but an approximation to the mother's milk. After the birth of the child, nature continues to secrete an excess of nutrient matter; but this excess is transferred from the uterine system to the breasts, where it is secreted in the form of milk for the nourishment of the young offspring. Eighteen months is the usual period during which the child should be supported by the mother —nine months previous to birth, and about nine months after.

The female organs are so arranged that, in carrying on the functions of reproduction, one portion relieves the other. During gestation the breasts enjoy comparative repose, the development and growth of the infant devolving upon the uterus. After birth this responsibility is transferred to the breasts, the uterus resting for a time from the process of utero-gestation.

Many ladies seek for professional sanction to wean their infants after a few weeks' nursing, and some even to shirk the duty entirely. The demands made by the toilet, the pleasures of the table, fashionable society, late hours, or other forms of dissipation, render nursing inconvenient and distasteful. The disposition to evade this great natural duty should be strenuously opposed, for non-nursing deprives a mother of one of the most pleasurable and soothing duties of maternity, and it robs the infant of its inalienable right to breast-milk, laden with all the riches of its mother's affection, while exposing it to the dangers of artificial substitutes.

Much inconvenience and suffering may be obviated by paying proper attention to the breasts during pregnancy. For two or three of the last months they should be specially bathed with cold water every morning, and left perfectly dry. If the breasts are painful, hard, and much distended, two thicknesses of old linen, wrung out of cold water, may be placed over them, and covered with oiled silk. A kind of sling should then be formed by means of a handkerchief or band secured at the back of the neck, and so arranged as to support the breast. Only a sparing quantity of fluids should be permitted.

Diet for the Nursing Mother.

A woman does not require extra good living when nursing, but discrimination in the selection of her food is necessary; still she should feed well. If she eats slowly, she may eat sufficient to satisfy hunger, but it is important that she should not overload the stomach, or partake of indigestible food, which would occasion intestinal derangement, to the injury of the infant as well as herself. The meal hours should be regular, and late dinners or suppers avoided.

To prove that the kind of food taken by the mother powerfully

influences the quality of the breast-milk, it is only necessary to cite the well-known fact that the quality of cow's milk is mainly determined by the food on which the animal lives. Thus, a cow fed on swedes produces milk and butter having the flavor of turnips; showing that the milk partakes of the qualities of the food on which she feeds. The same holds good in regard to the human species, and proves the impropriety of a nursing mother being allowed to eat anything unwholesome or indigestible.

Experience has taught mothers that if they eat anything acid, and partake freely of fruits and vegetables, the milk brings on colic in the infant and causes diarrhœa. Mothers who nurse their infants must therefore often practice self-denial in eating and drinking for the sake of their offspring.

It is not intended to suggest by these remarks that a nursing woman should be excessively particular as to her food. Animal food, varied from day to day—beef, mutton, chicken, game and fish; and any kind of vegetables that has not been found to disagree with herself or her infant, may be eaten; but such kinds of meat as goose, duck, salted beef, shell-fish, rich or highly-seasoned dishes, pastry, etc., should not be taken. Greens, cabbage, fruit, and any other articles of food which the mother has found to disagree with herself or child, must also be avoided. Milk and water, barley-water, toast and water, or even cold water, in small sips, is best to appease the thirst to which the nursing mother is sometimes subject; but beer or wine tends rather to increase thirst.

Women who are nursing are liable to fits of depression. The best remedy is a short, pleasant walk, or a drive in the country. Healthy exercise in the fresh air admirably promotes cheerfulness and serenity of spirits. On no account should wine or stimulants be resorted to, for they only raise the spirits for a short time, and cause increased subsequent depression, to remove which fresh and augmented supplies of stimulants would be required. The society of cheerful friends is often a useful stimulus; but visiting must be done within prudent limits, or it will weary and harass the mother, and diminish or deteriorate the supply of breast-milk.

The regimen and diet of the wet nurse should be as nearly as possible like those she has been previously accustomed to. A

woman accustomed to active duties and frugal diet is certain to suffer in her health if she suddenly relapses into a life of indoor idleness, and has a too abundant supply of food, and takes stout or wine. A wet-nurse taken from industrial pursuits should continue to perform, at least, light duties, or take a large amount of regular out-of-door exercise. The use of stimulants is injurious, and if taken to cause a good supply of milk will result in disappointment, and bring on indigestion and a host of evils, from which the infant is sure to suffer. If the child does not steadily grow and increase in weight, the nurse should be changed.

If there be a choice of nurses of otherwise equal capacity, preference may be given to one of dark complexion, for it has been found that the milk of the brunette is richer in each of the organic constituents than that of the blonde.

In the interest of healthy women employed as wet-nurses, we state here that a syphilitic infant ought not to be nourished from their breasts. The nurse who suckles such a child incurs enormous risk; for many an unsuspecting woman has acquired syphilis from her nursling. Artificial lactation, if properly carried out, may, in such a case, be an excellent substitute for the breast.

Stated Hours for Nursing.

A habit very generally prevails, on the part of the mother, of giving the infant the breast too frequently; a habit prejudicial alike to the mother and child. It may be laid down as a rule, that for the first month the infant should be suckled about every two hours and a half during the day, and every four hours during the night; the intervals should be gradually lengthened until about the third month, when it should have the breast only every three or four hours during the day, and about every sixth hour at night. Even during the earliest period of infancy, a child will acquire regular habits in this respect, by judicious management on the part of the mother. By giving the breast only at regular stated times, the mother will be able to obtain proper rest and hours of uninterrupted sleep, which can scarcely be enjoyed by those who have fallen into the bad habit of permitting the infant to be at the breast during a considerable part of every night, or of offering it to the child whenever it cries or manifests any uneasiness.

Depressed and Sore Nipples.

During pregnancy an examination should be made to ascertain whether the nipples are of the proper size and shape, for in many instances they are deficient, or have been so thoroughly compressed by tight clothes that, after confinement, nipples can hardly be said to exist.

Treatment.—A very simple and efficient measure to elongate the nipple, is to tie a piece of woollen thread or yarn two or three times around its base, after having pulled it gently out with the fingers. It should be tied sufficiently tight to keep the nipple prominent, but not enough to interrupt the circulation. The woollen threads may be worn several weeks without inconvenience. The daily application of the pump to the breast, taking the nipple within its chamber, and exhausting the air by withdrawing the piston, elongates the nipple. The nipple should be retained within the chamber for about fifteen minutes each time. After the use of the pump an application of arnicated water, or of diluted glycerine, should be made to the nipple and surrounding part, to prevent excoriations. The same result may be secured by suction, twice a day, by the husband or nurse. An imperfectly developed nipple may be much improved by this method, if intelligently carried out. The measures adopted to elongate the nipple should be commenced two or three months before labor, and if necessary continued, in a modified form, during the commencement of lactation.

In some cases, if the preparatory treatment just suggested be adopted, sore nipples will be prevented. But where there is a tendency to excoriation and soreness, as in women of fine, sensitive skin, the nipples and the breasts around should be bathed several times daily with a lotion made by adding twenty drops of the tincture of Arnica to a tumbler of water. We can testify to the entire success of this application in a very large number of cases we have treated. The lotion should be applied after each time of suckling, and the nipple moistened with saliva or mucilage before again allowing the child to suck. Another local remedy for sore nipples is Glycerole of Ver.-Vir.—5 drops of Ver. Vir to ʒij of Glycerine.

In obstinate cases, in which the complaint appears to be owing to constitutional causes, one of the following remedies is often required:—Calc., Merc., Graph., Lyc., Silic. or Sulph. Silic. is especially recommended for retracted nipples.

Accessory and Preventive Means. — Small compresses, wrung out of cold water, are very useful, especially if the nipples are sore, hot and burning. In order to prevent sore nipples, they should be washed over gently with tepid water immediately after the child has been nursed, tenderly dried by means of soft linen, or a fine towel, and then dusted with superfine wheat flour, or finely-powdered starch. As before recommended, the entire breast should receive daily morning ablution, with water—cold, if the patient can bear it, but if not, tepid may be used for several times, gradually reducing it to cold. The infant should only be allowed to suck at stated periods say every third or fourth hour, as previously directed. The habit of permitting the infant to have the nipple almost constantly in the mouth very frequently leads to tenderness and soreness. The child's mouth should be examined, and if found to be suffering from Thrush, the treatment recommended in Part V. should be at once adopted. In the meantime the nipple should be washed with a solution of Borax (x grains to an ounce of water) [or application of Sedative Saxoline twice a day].

Sore Mouth of Nursing Mothers.

This is an affection from which nursing women occasionally suffer. It consists of inflammation of the lining of the mouth, which is covered with very small ulcers; these cause stinging and burning sensations, and a cheese-like matter exudes from them. A profuse flow of saliva is also frequently present. The predisposing cause is the scrofulous cachexia. Now and then it proves an intractable disorder.

Treatment.—*Arsenicum.*—If ulceration becomes extensive, and there be burning pain in the mouth, with red, glazed tongue.

Borax.—Is an excellent remedy in the early stage of the malady.

Mercurius.—Corroding ulcers, with swollen gums, fœtid breath, and profuse flow of saliva

Nitric Acid.—On the failure of Mercurius, this remedy should be had recourse to.

Local Treatment.—Borax (ten grains to one ounce water), Carbolic Acid (half drachm to ounce and a half olive oil), Hydrastis (three grains to three ounces water), Calendula (one drachm to four ounces water), are the various kinds of gargles and washes that have been found most useful as palliatives while the medicines are effecting the necessary blood-changes.

Accessory Measures.—Acidulated drinks—lemonade, etc.—are very valuable. Vegetable and animal food in due proportion, with wholesome ripe fruits, oranges, grapes, roasted apples, etc. Fruits containing vegetable acids are often alone curative, and are usually very grateful to patients. Weaning, travel, change of climate, etc., may be necessary in exceptional cases.

Deteriorated Milk.

If the various methods we have offered in this work are faithfully carried out, there will seldom be cause for complaint of bad milk.

Methods of Investigating the Milk.—As a ready method of judging of the quantity and quality of the milk, an inspection of the breasts of the mother or nurse should be made. The breasts should be firm and pear-shaped, and covered with blue veins. Pressure on the gland should excite the flow of milk, which should be opaque, of a dull white color, and under the microscope present fat globules of a fair size. The number of these globules is indicative of the amount of caseine and sugar present in the milk. On a piece of glass a drop of good milk maintains its globular form, and does not readily run off the glass. Poor milk, deprived of its solids, lacks these qualities, and runs off on the least inclination of the glass. Obviously, however, the most satisfactory test of the excellence of the milk is furnished by observation of the child. If he sucks vigorously, finishing with the milk running over his lips, and requires a meal but three or four times in a day, we may conclude that the milk is sufficient in quantity. But if he frequently desires the breast, sucks with effort or spasmodically, now and then desisting and crying, the milk may be considered insufficient. As a further test

of the quantity of the milk, the infant may be weighed immediately before and after a meal; the difference in the weight should be three or four ounces.

Symptoms.—Vomiting after each act of sucking, or refusing to suck, generally indicates bad milk. When the milk is deprived of its due proportion of solids and becomes watery, it fails to afford the requisite nourishment; on the other hand, if the solids are in excess, it gives rise to indigestion.

Causes.—Acute and chronic diseases in a nursing mother tend, in various ways, to impair the quality of her milk. Nursing during either of the extremes of age yields generally only innutritious milk. Menstruation, and also pregnancy, deteriorates the milk supply; and, although occasionally children nursed under these conditions may appear not to suffer, it is obvious that the active functions of the breasts and of the womb cannot go on healthily at the same time. Emotional disturbances and violent exercise exert great influence on the milk secreted; and if children are nursed immediately, extreme convulsions, and even fatal results, may follow. The effects of diet on the milk of nursing ladies has already been referred to.

Treatment.—*Aconitum.*—The presence of any febrile symptoms would indicate the employment of this remedy.

Calc.-C.—Thin, watery condition of milk; delicate constitution.

Nux Vomica.—When the deterioration can be traced to the use of alcohol; in cases of the Nux temperament.

Pulsatilla.—Alcoholic cases of the Pulsatilla temperament.

Accessory Measures.—Every means should be adopted to improve the patient's health by suitable food and abundance of pure air, and by placing her beyond the reach of household and other cares and anxieties.

Insufficient Supply of Milk.

Causes.—The quantity of milk varies greatly in different women, but when it is insufficient for the nourishment of the child, the cause may be traced to imperfection in the mother's health, and measures should, if possible, be adopted to correct this, so that after a subsequent labor she may be able to furnish the infant with sufficient milk.

Treatment.—Agnus Castus, Asafœtida, and China are more or less efficacious in increasing the supply of milk, the first two medicines when the cause of the deficiency is undiscovered, the last when the deficiency is the result of hæmorrhage, diarrhœa, leucorrhœa, etc.

The external application of the castor-oil plant (Ricinus Communis) has been used by some physicians with great success. A strong decoction is applied hot by means of soft rags, and retained until the milk is secreted copiously.

Accessory Means.—Warmth always favors the secretion of milk. The diet is important, and should be nutritious and digestible. Good cocoa is very useful, improving the quality and increasing the quantity of the mother's milk, and we have known it to succeed after other means had failed. During the whole period of nursing this nourishing beverage will be found highly conducive to the health of both mother and child. When the quantity of milk cannot be increased to meet the requirements of the child, mixed nursing must be adopted, according to the directions given in the section on hand-feeding. It is important that the mother should suckle her baby during the day, and have it fed by the bottle at night. This arrangement permits the mother to enjoy a good night's sleep, which in itself favors the secretion of milk.

Suppressed Milk.

Causes.—Exposure to cold, powerful emotions of the mind, or any circumstance which causes febrile symptoms.

Treatment.—*Aconitum.*—In all cases attended with feverish symptoms, especially if from cold.

Bryonia.—Is useful where there are stitching pains in the chest or side.

Chamomilla. —If the suppression has arisen from a sudden mental emotion, particularly anger.

Coffea.—Where there is unusual restlessness or sleeplessness.

Pulsatilla. —Partial or entire suppression, without febrile symptoms. This remedy exerts a healthful influence over the constitution in almost every departure from the normal course during the whole period of nursing.

Accessory Means.—When the distention and irritation have been relieved by medicine, the milk which has been arrested will generally flow quite freely. Should the discharge continue imperfect, the breast-pump may be used, or, which is better, a strong child may be applied.

Method for Promoting the Flow of Milk. — In all cases where the flow of milk is tardy, the following plan for accelerating it will be found to be available and safe. Take a decanter and fill it with boiling water; when it is thoroughly hot, suddenly empty it, and place it on the breast, with the nipple in the neck of the bottle. The gradual cooling of the decanter will create a vacuum; the nipple will be gently pressed into it without pain, and the atmospheric pressure on the breast will, in almost every instance, cause the milk immediately to flow. The experiment may safely be repeated after a short interval if it does not happen to be successful at first. Care must be taken to protect the breast, by covering the mouth of the decanter with leather, or thick flannel. A hole made in the center of this will keep the nipple in its proper place.

Excessive Secretion of Milk.

Occasionally the secretion of milk may be so abundant and continuous as to become a serious tax on the constitution, so that the mother's health soon gives way. Loss of appetite, debility, dragging sensations, or pain in the back and chest, and if the symptoms continue unchecked, Hectic-fever and premature death from the so-called "Nurses' Consumption."

Treatment. — *Bryonia.* — Painful distention of the glands, oppression of the breasts, etc.

Calcarea Carb.—Too abundant secretion of milk, with spontaneous emission of it, and loss of flesh.

China.—For the debility consequent upon the excessive flow.

Phosphoric Acid.—Is of great service for the ensuing weakness, especially if there is much perspiration.

Accessory Means.—Weaning is the first remedy to be adopted. Generally the milk then soon ceases to form, and the patient gains flesh and strength. A change of air and good hygienic conditions greatly aid recovery.

Involuntary Escape of Milk.

Cause.—Deficient tone in the milk ducts, which often co-exists with loss of tone in the general constitution.

Treatment.—Borax, Bryonia, Calcarea Carbonica, China, and Pulsatilla are the remedies mostly employed to moderate the involuntary escape of milk.

Accessory Means.—The breasts should be sponged with equal parts of cold vinegar and water (or one part of strong acetic acid to twelve parts of cold water), morning and evening, and rapidly and carefully dried with a soft towel afterwards. To keep the dress from getting soiled, nipple-glasses may be worn; but they should never be used unless absolutely necessary, as they are apt to keep up, instead of to diminish, the flow of milk.

Prolonged Nursing.

The process of lactation forms a great drain on the constitution, and although healthy women, under favorable circumstances, suckle their children for a considerable time without sustaining injurious effects, still in delicate persons, or under unfavorable hygienic conditions, nursing, even within the otherwise healthy term, may be productive of permanently serious results.

Some mothers derive the greatest pleasure from nursing their children, and never seem quite ready or willing to wean them. In addition to the pleasure of suckling, there is often another powerful motive to postpone weaning as long as possible. Generally the function of menstruation is suspended, and it is well known that the nursing-mother who does not menstruate is not likely to conceive. Hence we often find lactation continued for twelve or eighteen months, with the view of avoiding pregnancy. This expedient we have frequently found to be adopted, especially by poor dispensary patients. But, inasmuch as nursing does not always shield from pregnancy, and as the health is generally injured by prolonged nursing, weaning should always take place at about the ninth month.

The period when nursing becomes hurtful varies considerably in different cases, from a few weeks after the birth of the child to nine or ten months.

The symptoms which indicate that lactation is injuriously affecting the mother are—aching pain in the back, or a dragging sensation when the child is in the act of nursing, accompanied or followed by a feeling of exhaustion, sinking, and emptiness; general weariness and fatigue; want of, unrefreshing, or disturbed sleep; headache at the top of the head, the painful spot being often perceptibly hotter to the touch than other parts; dimness of vision; noises in the ear; loss of appetite; dyspnœa and palpitation after exertion or ascending stairs. If the nursing is persisted in, the patient becomes pale, thin and weak; other indications of debility follow—night-sweats; swelling of the ankles; nervousness; and extreme depression of spirits, the melancholy being often of a religious character. In short, we may have the early symptoms of Puerperal Mania, and it is important that these symptoms should be quickly detected, and when they are amenable to treatment.

The symptoms of excessive lactation may occur in delicate women who have had several children in quick succession; also as the consequence of inherent deficiency of the vital powers, imperfect nutrition, hæmorrhage, abortion, or exhausting leucorrhœa, or any other accidental cause of debility, involving most injurious —often lasting—consequences to the mind and body.

Treatment.—*Calcarea Phos.*—Scrofulous or chlorotic symptoms, with loss of appetite, emaciation, dry cough, short breathing, with predisposition to Consumption.

Causticum.—Excessive appetite, followed by a sense of emptiness soon after eating, or loss of appetite; irritable or easily vexed disposition; impaired memory; nervous anxiety, with despondency; throbbing headache, with pulsations and noises in the ears; threatened Amaurosis; twitchings of the muscles, etc.

China.—Much weakness, noises in the ears, palpitation, swelling of the legs, etc.; especially if there have been night-sweats, excessive menstruation, hæmorrhages, or leucorrhœa.

Cimicifuga.—Mental dulness and heaviness; melancholy; alternate depression and exaltation (also Ign.). Especially valuable in melancholy from prolonged lactation; and when this symptom occurs during menstruation or pregnancy.

Administration.—A dose every four or six hours.

Accessory Means.—Weaning is the first indication, and should be commenced immediately; nothing short of this will in general be of any utility. An attempt to force the supply of milk by large and frequent quantities of beer, wine, or spirits, will be unsuccessful and injurious. Should the infant be four or six weeks old, it may be weaned with a fair chance of doing tolerably well. Indeed, cases now and then occur in which the function of lactation cannot be continued even so long as a month. In slight cases, however, and when the infant is but a few weeks old, the mother should have a good supply of plain nourishing food, with cocoa, and good milk, to the exclusion of tea, coffee, etc. The use of cocoa is often productive of the best results by augmenting the secretion of milk. If, notwithstanding the use of these means, a proper supply of milk is not yielded, and the health and strength of the patient do not improve, all attempts at nursing should be at once abandoned.

Further, should the monthly courses return, or should pregnancy commence, weaning should immediately take place. To persist in nursing under such circumstances would be fraught with danger to the mother, and, probably, productive of permanently feeble health and stunted growth to the infant. Mania, where there is any predisposition to it, is extremely likely to happen when pregnancy or menstruation is allowed to proceed simultaneously with lactation.

Weaning.

The ordinary period for weaning is about the eighth or ninth month; but the time that the child is in good health, and free from the irritation of teething, should be chosen as the most appropriate. Too hot weather, or the prevalence of any intestinal epidemic, may necessitate the deferment of weaning for a short time. If the mother is feeble and sickly, it is generally desirable to wean the infant when it is six months old, or, as stated in the previous Section, even at the end of the first or second month, if the mother presents evidence of suffering from lactation. On the other hand, if the child is very feeble, or suffering from any disease, it may be well to nurse it to the tenth or eleventh month, if, at the same time, the mother's health is

robust. Beyond that time nursing is nearly always productive of serious consequences, both to the mother and child. When weaning is decided upon, the mother should gradually diminish the allowance of the breast, and increase the supply of suitable kinds of food. Too sudden weaning increases the risk of local mischief, and of a general derangement of her health. In some cases it is a good expedient for the mother either to send the child away, or leave him at home and to go away herself for a few days. As soon as the weaning is commenced, the mother should remain quiet for a little time, in order that the swollen breasts may not suffer from the motion of the arms or the pressure of the stays, and that the system may be free from excitement. She should take only light nourishment; refrain from food likely to induce thirst; drink as little as possible, and that of cold water; keep the breasts covered with some light, warm material; and avoid soups and other liquid kinds of food.

Treatment.—*Bryonia.*—Excessive quantities of milk.

Belladonna.—Red, painful and distended breasts.

Calc.-C., Puls., and Rhus. are sometimes required.

Accessory Means.—In addition to the suggestions offered above, if the flow of milk continues too abundant during the first few days of weaning, nipple-glasses may be kept applied to receive the milk; gentle friction with the hand, lubricated with olive-oil, may also be had recourse to, for softening the skin. When the breasts are large and flabby they should be supported by a broad handkerchief or strips of plaster, as recommended under "Mammary Abscess." The breasts must not on any account be drawn, as a continued secretion is thus promoted; such a practice also endangers the formation of Mammary Abscesses.

Gathered Breasts.

This may take place at any time during the nursing period; but it is usually an accompaniment of that great functional change in the glands which marks the commencement of lactation, especially in the first or second month, often as early as the fourth or fifth day after the birth of the child. It is most likely to arise after the birth of the first child.

Symptoms.—These vary according to the situation and extent of the inflammation. If it merely affects the subcutaneous cellular tissue covering the gland, it will present only the features common to an Abscess in any other situation near the surface. When the inflammation occurs in the tissue behind the gland, and on which it is placed, the pain is severe, throbbing, deep-seated, and increased by moving the arm and shoulder; the breast becomes swollen, red, and more prominent; being pushed forward by the abscess behind. Sometimes, but less frequently, the gland itself is involved, when the pain becomes very acute and lancinating, the swelling very considerable; and there is much constitutional disturbance—quick, full pulse, hot skin, thirst, headache, sleeplessness, etc. This variety of gathered breast is preceded by rigors (shivering fits), followed by heat, and the case should be immediately placed under the care of a medical man, who may only then be able to arrest the further progress of the disease.

Causes.—Exposure to cold by not covering the breasts during nursing; sitting up in bed, uncovered, to nurse the child; too small, depressed, or sore nipples, so that the breast becomes distended with milk, favoring inflammation and suppuration; efforts of the child to suck when there is no milk in the breast; strong emotions, mechanical injuries; too prolonged nursing, the Abscess in the latter case not appearing until a late period—the tenth to the twelfth month. Too sudden weaning by allowing a large accumulation of milk in the breasts, and deranging the general health by the abruptness of the new condition of things, is also an exciting cause. Tight-fitting stays, by compressing the glands, keep the breasts too hot, and derange the circulation in them, and act as predisposing causes. But constitutional debility is the great predisposing cause; hence it most frequently happens after a first labor, which is often a protracted one; after giving birth to twins; and after profuse hæmorrhage. Debility leading to Abscess may occur as the result of innutritious slop-diet, too often adopted during the first week of confinement. Some patients are so strongly predisposed to Mammary Abscess that without the greatest care they are certain to have one during the nursing period.

Treatment.—*Aconitum.*—Given at the very commencement,

the inflammation may be at once subdued, and suppuration prevented.

Belladonna. — This medicine may be required during the inflammatory state if the surface of the breasts have an erysipelatous, glassy redness.

Bryonia.—Large collection of milk, the breasts being hard, or feeling heavy, hot, and painful. Whenever, after the first coming-in of the milk, from catching cold while nursing, or from abrupt weaning, the breasts become swollen, tender, knotty, and painful, Bryonia will often resolve the inflammation and prevent the formation of abscesses, if the remedy be given early.

Hepar S. — May be required to expedite the process of suppuration.

Phosphorus.—Relieves pain in the breasts and promotes the healing of the abscess.

Phytolacca. — This is probably the most useful remedy for inflammatory engorgements of the mammary gland, both at the commencement, and when suppuration has already taken place. It may be used internally, and in the form of a lotion. The testimony to the value of this remedy is very strong.

Silicea is of great service in strumous cases where the abscess is slow in healing.

Sulphur.—Chronic abscess, profuse suppuration, with chilliness in the forenoon, feverish symptoms, and flushed face in the afternoon part of the day.

Accessory Means.—Two or three hours after labor—sooner if there is much hæmorrhage—the infant should be applied to the breasts, but only about once in every four hours, until the supply of milk is uniformly secreted. The breasts should be supported by a broad handkerchief, or a net-work supporter, or by strips of adhesive plaster, nicely and uniformly applied, as their weight aggravates the patient's sufferings greatly; strips of plaster are also used to effect uniform compression of the glands, and thereby diminish their secretion. A linseed poultice, or a piece of spongio-piline dipped in hot water, should be applied to the part; this will allay the pain, by relieving tension and causing perspiration. The use of Camphorated Oil, followed by dry heat—as of an iron passed close to the breast—and then enveloping the

breast in cotton-wool. Dr. Holcombe of New Orleans has most confidence in a plaster made of equal parts of Belladonna and compound Iodine ointment, into which a few grains of gum Camphor have been rubbed. This should be worn continuously and renewed every twelve hours as long as necessary. A solution of Camphor and Glycerine, applied over the gland by means of a flannel compress, is also a useful application. In extensive engorgement and induration, an opening is necessary, and should be made in the most dependent situation as soon as fluctuation is discovered. If the matter be not evacuated as soon as it can be felt, it will be diffused in various directions through the breast.

It is important to remember that Mammary Abscess is a symptom which strongly points to constitutional feebleness, indicating the necessity for pure air, sunlight, suitable bathing, and nourishing diet—lightly dressed eggs, tender lean meat, oatmeal, and brown bread. By eating the latter, the patient has the advantage of the Phosphorus which is contained in the covering of the grain, but much of which is lost by the dressings which fine flour undergoes. The mind must be kept free from domestic worry and all kinds of care.

The preventive treatment consists in relieving the breasts as soon as they are filled; in keeping the patient warm; and in good diet.

In still-births and cases where it is necessary to get rid of the milk, attention should be directed primarily to the application of perfect rest, with a certain amount of pressure. A large soft handkerchief placed around the neck and under the breast, with another reversed and passing over the breast around the body, a cotton-wool pad being interposed, will secure efficient pressure. The shoulders should be raised and the arms kept still; the upper part of the chest only lightly covered. Friction, or drawing of the breasts, should be eschewed. A moderate diet, and abstinence from fluids for a few days, combined with the above measures, may be regarded as a sure preventive of Abscess.

PART V.

DISEASES OF INFANTS AND CHILDREN.

CHAPTER I.

GENERAL DIRECTIONS FOR THE MANAGEMENT OF INFANTS.

Before commencing a description of the most common diseases of infants and children, we think it necessary to offer some general instructions on the management of early infancy, touching on points which may appear to be of only minor importance, but which have a most important bearing on the prevention of infantile disease and mortality.

The Newly-born Infant.

As an illustration of helpless weakness, nothing can exceed that which an infant presents at birth. The little thing requires aid of every kind, and if abandoned it soon perishes.

If an infant be born before the doctor's arrival, it should receive the attentions pointed out in the section on Labor, in Part IV. If the child is healthy and strong it will cry vigorously. The act of crying helps to fill the lungs with air, and thus the functions of breathing and pulmonary circulation become established.

As soon as breathing has fairly commenced and the navel-string been tied, the infant should be enveloped in soft, warmed flannel, and, every thing being ready beforehand, immediately

washed, and as quickly as possible. *Immediately*, for the skin requires cleansing from the tenacious fluid which adheres to it at birth, in order that healthy transpiration may be established. A new-born child is often allowed to remain a long time before it is washed, and even then it is not always washed quickly and skillfully, so that it shivers, and its skin becomes blue before it is placed by its mother's side.

Before commencing the process of washing the eyes should be carefully wiped with a piece of moist, soft linen, then the rest of the body should be cleansed by means of a fine sponge, with warm water and a little soap, and carefully dried with a soft, warmed towel. If the unctuous matter be considerable or very adhesive, a little fresh lard rubbed upon the skin, previously to the application of soap and water, will render its entire removal an easy operation. As soon as the cleansing is completed, a little fine starch powder may be dusted lightly on the surface, especially in the creases of the joints.

The navel is dressed by folding a piece of soft linen into four or six thicknesses, about six inches by three, and cutting a hole through the center for the remnant of the cord, winding around it a strip of soft linen; then one half of the folded linen should be doubled over the other half so that the portion of cord lies between the folds, and directed upwards towards the chest; the whole is to be kept in apposition by a band, about four inches wide, passed gently around the child's abdomen, and worn till the remnant of the cord comes away, which is usually about the sixth or seventh day. The separation of the cord may be hastened by the application of a small piece of scorched rag to the juncture of the cord and navel. Until this separation is effected, great care should be exercised not to disturb the dressing during washing.

As soon as the mother has somewhat recovered from the exhaustion of labor, the infant should be put to the breast. The application of the child to the maternal font at once often prevents, or much diminishes, the disturbances incident to the coming of the milk; it also tends to appease the wants of the infant, and enables it better to grasp the nipple than when the breast is over-distended or hard with the milk; further, by its

favoring contraction of the womb of the mother, the probability of secondary uterine hæmorrhage, and also the chance of what is called "Milk-fever," will be much lessened.

Immediately after being dressed, the infant should be laid in its mother's bosom, and not, as is too often the case, placed by itself in a cradle, where it is in danger of being too cold. As a general rule, for the first few days it should sleep in the same bed with its mother, especially during cold weather; afterwards it should sleep in a cradle or cot.

It is affirmed by some nurses that until the third day after labor the breasts contain no milk, and that a substitute—gruel or some other farinaceous preparation—is necessary. In the great majority of cases, milk, sufficient for all the requirements of the infant, is present on the first day, and the only thing necessary to be done is to apply the child's mouth to the nipple Should there be no milk at the moment the suction of the infant, which is the natural mammary stimulant, will hasten the secretion; while, as we have elsewhere stated, the suction promotes the necessary uterine contractions which are favorable to the mother. If, after repeated attempts, in eight or nine hours, there be no breast-milk drawn, the child may have, until the secretion be fairly established, cow's milk, diluted with warm water (two-thirds milk to one-third warm water) without the addition of sugar. The milk should not be boiled, nor should the water added to it be too hot; for in either case the albumen is liable to be coagulated, and the milk rendered less digestible. The administration of any kind of farinaceous food or sugar to the new-born infant is not only unnecessary, but is likely to prove of incalculable mischief.

Still-born Infants.

Children are sometimes born apparently dead, and if means are not quickly adopted, this condition may pass into one of real and permanent death. But so long as the heart continues to beat, even but feebly, there is a probability that well-directed efforts will be successful in exciting breathing.

Causes.—Constitutional feebleness, so that the effort necessary to commence breathing cannot be made; obstructed circulation

during labor by pressure or twisting of the navel-string; too long-continued compression of the head; tenacious mucus in the mouth and throat, preventing the entrance of air, etc.

Treatment.—The first efforts to promote breathing are to be made *before* the navel-string is divided. Obstructive mucus should be carefully wiped away from the mouth and throat, and the general surface exposed to cold air; an attempt should then be made to excite the function of breathing by blowing in the infant's face, sprinkling cold water with some little force on the face or chest, or alternately cold and hot, and by giving several smart blows with the hand, or with the corner of a towel wetted with cold water, on the buttocks, back, and chest. The back and limbs should be well rubbed, while the face is freely exposed to the air.

The following is another capital method of exciting breathing:—Close the infant's nostrils by the finger and thumb, press the windpipe gently backwards, and then blow into the mouth, so as to drive the air into the lungs; afterwards press the ribs together, so that the lungs may expel the air. This process should take place about fifteen times in one minute, and if persevered in, is most likely to be successful in a short time. Meanwhile the body should lie on a flat surface, and be well rubbed with warm flannels, and the head not suffered during these efforts to fall on the chest.

If these means are not successful, and pulsation has ceased in the navel-string, it should be divided as before directed, and the infant plunged into a warm bath, 98 deg. Fahr., or what is agreeable to the back of the hand. If the sudden plunge does not excite breathing, it will be no use keeping the infant in the bath beyond a minute or two, and Dr. Marshall Hall's ready method may then be tried, as follows:

"Place the infant on its face; turn the body gently, but completely, on the side and a little beyond, and then on the face, alternately; repeating these measures deliberately, efficiently, and perseveringly, fifteen times in the minute only."

Washing and Bathing.

Cleanliness is of great importance to the healthy growth of children. An infant in health should have a tepid bath once in

the twenty-four hours—in the morning. The best method is to dip the baby into a bath of tepid water, while the head is supported by the hand and arm of the nurse, and then have the whole surface of the skin rapidly rubbed with a soft soaped sponge or piece of flannel; next again immerse the body in the bath, and then quickly and thoroughly dry with a fine, warm towel. During warm weather, tepid bathing should not be continued beyond one or two months, after which it should gradually give place to colder. Feeble infants may require tepid bathing somewhat longer. For children born in the winter, the lukewarm bath may be continued till the return of warm weather, when the change to cold should be made. Except as above stated, warm bathing is to be emphatically condemned. The use of cold water, on the other hand, affords a great protection to children against excessive sensibility to atmospheric changes. But no child should have a cold bath oftener than once a day.

The Warm Bath.

The warm or hot bath is best given in the following way: The child should be immersed in warm water up to the neck, and directly afterward affusions, or a towel or sponge, squeezed out of cold water, applied to the head; the cold towel or sponge may be applied for two or three minutes, but the patient kept in the bath for five or ten minutes. The temperature of the water should be about 98 to 100 deg., or what can be agreeably borne by the back of the hand, and for a warm bath, about 90 deg.; the temperature should be fully maintained, by additions of hot water carefully poured down the side of the bath till the child is taken out. The bath should be given in front of a good fire, and a warmed blanket be in readiness to wrap the child in directly he leaves the bath.

The warm bath is of great value in many affections of children, especially in febrile diseases; in spasmodic affections of the bowels, or bladder; in Prurigo, Tetanus, and in Convulsions. In the last-mentioned disease it draws the blood from the overloaded brain to the general surface of the body, and by equalizing the circulation relieves the local condition. In fevers it calms the nervous excitement, and is often followed by healthy sleep.

Clothing.

Besides adapting it to the season, the clothing should be loose, soft, light, warm, arranged to fit without pins, and to cover the legs, arms, and neck. After the separation of the navel-string, a belt, stays, etc., are unnecessary.

When a baby is divested of its long clothes, it is in danger of being insufficiently clad, the danger increasing when it can run alone and is more exposed to atmospheric influences. It cannot be too strongly impressed upon those who have the charge of children, that the practice of leaving parts of the body exposed which, in the case of adults, it is found necessary to clothe warmly, especially the lower limbs and abdomen, is a frequent cause of retarded growth, mesenteric disease, Consumption, etc. Warmth is of prime importance for children of all ages, and especially so for newly-born infants. Warm clothing should cover the whole body. But in hot weather it is of prime importance to keep children cool, for Diarrhœa and other summer complaints may be thus to a great extent avoided. Excess of clothing, night or day, is to be guarded against. [Soft flannel in contact with the skin is necessary in our changeable climate.] The clothing, too, should be scrupulously clean, and all soiled and wet articles immediately changed. Caps are unnecessary; the aim should be rather to "keep the head cool and the feet warm." In all cases the night clothing should be looser and less warm than that worn in the day. It is also important that the dress should not impede the free movements of the limbs, or exert pressure on the digestive, breathing, or circulatory organs.

Sleep.

Except in earliest infancy, or in the case of infants prematurely born, or constitutionally feeble, or during very cold weather, it is advisable that they should sleep apart from the mother or nurse, in a cot, care being taken that they are warmly but not excessively covered. Not only infants, but children of both sexes, should, if possible, sleep alone

During the first few months after its birth, a healthy infant spends the chief part of its time in sleep. Even up to about the third year a mid-day sleep is beneficial.

He should be fed, and put to bed, at stated hours, as regularity is of the greatest importance in all matters pertaining to children.

When the time for sleep arrives, infants should be placed directly into their cot awake; the unnecessary and objectionable habit of rocking or nursing them to sleep in the arms should never be formed. Neither should ordinary footsteps, speaking, or other moderate sounds be avoided, but the infant should be accustomed to sleep under such conditions.

All the so-called soothing remedies, syrups, cordials, spirits, or sleeping drops, should be strictly avoided, containing as they do, to a greater or less extent, Opium in some of its forms. These sleeping-mixtures inflict an incalculable amount of mischief on health, and largely swell infantile mortality. No medicines to promote sleep should ever be given, except such as are prescribed in the section on "Sleeplessness."

Pure fresh air is of extreme importance to children during sleep. Nurseries should be as spacious and airy as possible. The practice of shutting bedroom doors is objectionable, if the children can be protected from draught. A great advantage to health is secured by separate night and day nurseries; but where this is impracticable, the children should be out of the nursery a great deal, and every opportunity seized for promoting ventilation, by opening doors and windows at all suitable times.

Open-air Exercise.

Children require fresh air and sunlight as much as plants and flowers do; and as the latter are colorless and imperfect if excluded from direct sunshine, so children who live in places where light does not abundantly enter are pale and feeble. In fine weather, an infant over a month old should be taken out at least twice a day; the only precaution necessary being that it should be sufficiently clothed. In warm, sunny weather, the more it is in the open air, the better, if care be observed to protect the head from the hot sun. In short, a child should almost live out of doors during suitable weather. Plenty of exercise in the open air is necessary for the healthy development of the limbs and body generally. Suitable athletic games and exercises should form a part of the early education of all children, and these

games and exercises should take place in the open air, except during inclement weather, when they may be carried out in spacious, well-ventilated rooms.

Feeding.

No point is of higher importance in the rearing of children than the proper management of their meals and meal-hours. Errors in feeding probably rank first among causes of infantile disease and mortality.

Maternal milk is the sustenance provided by nature for the infant, and as yielded by healthy mothers is superior to all artificial substitutes; and suckling is the best method of feeding.

When the mother enjoys good health, and has a sufficient quantity of milk, an infant requires and should have no other food but breast-milk until from the sixth to the ninth month. Even during the first day or two, the breast usually furnishes sufficient nourishment. The too-common practice of giving butter and sugar, gruel, etc., to a new-born babe should be strictly interdicted as an uncalled-for act of cruelty. Should the formation of milk be unusually long delayed, a little new cow's milk (unboiled), diluted with an equal quantity of warm water, may be given until the function of the breast becomes established. For the first five or six weeks the infant should be applied to the breast at regular intervals of two hours and a half during the day, and at longer intervals, if possible, during the night; but after the first two or three weeks he should be accustomed to remain without food from about 11 p.m. to 5 a.m. It is important, too, that the infant should suck from each breast alternately. Regular habits of feeding may be soon acquired; and it is a great mistake, and the cause of wind, colic, and other disorders, to give the infant the breast whenever it cries, or to let it be always sucking.

A nursing mother or wet-nurse does not require an extra or a rich dietary, but discrimination in the selection of her food. To overload the stomach, or to eat indigestible articles, would occasion digestive derangements, to the injury of the infant as well as herself. The meal hours should be regular, and late meals avoided. The thirst to which nursing mothers are liable is best appeased

by milk-and-water, barley-water, toast-and-water, and similar beverages.

The regimen and diet of a wet-nurse should as near as possible resemble those she has been previously accustomed to. A woman of active duties and frugal diet is certain to suffer in her health if she suddenly relapses into a life of indoor idleness, and takes a too abundant supply of food, and such beverages as ale or stout. A wet-nurse taken from industrial pursuits should continue to perform at least light duties, or take a large amount of regular open-air exercise. The use of stimulants is injurious, and if taken to cause a good supply of milk may result in disappointment or debility, and bring on a host of evils from which the infant cannot escape.

Should a nursing-mother begin to suffer from headache, dim sight, dizziness, shortness of breath, palpitation, or night-sweats, it is evident that nursing exhausts her, and should be discontinued. If a wet-nurse suffer from similar symptoms, the child should be at once taken from her.

The diet of infants being of great moment to their well-being, we shall devote the following chapter to the further consideration of the subject.

CHAPTER II.

EXAMPLES OF DIETARY FOR HEALTHY CHILDREN, AT DIFFERENT AGES.

In consequence of the vital importance of the diet of children, as furnishing materials for the maintenance of health, and for growth and development, we deem it necessary to give detailed examples of dietary adapted to infants and older children at ages when they are most likely to be improperly fed, and when the consequences of such feeding are sure to tell disastrously: namely, 1st, from birth to six months old; 2nd, from six to twelve months; 3rd, from twelve to eighteen months; and 4th, from eighteen

months to two years, and upward. As it is impossible to make one invariable rule applicable to the different constitutions and requirements of children, it is scarcely necessary to add that the quantities stated in the following arrangements are only approximative. But the amounts of farinaceous food stated will generally be found sufficient.

As the diet suitable for children suffering from disease is pointed out in Part VI., it is not described in the present section.

For the First Six Months.

Diet 1.—We commence by stating emphatically that children who enjoy their inalienable right to maternal breast-milk, assuming this to be suitable in quality and sufficient in quantity, require no other food. The infant should be applied to the breast every two hours and a half during the day for about the first six weeks; afterward only once in every three or four hours. But he should not be awakened from sleep to be fed. After about the first month it will not be necessary to give the breast at all between the hours of 11 p.m. and 5 or 6 a.m. The early commencement of this arrangement is very important, as it affords the opportunity for that regular, undisturbed repose which contributes so much to the well-being of both mother and child.

Diet 2.—For children brought up by hand, cow's milk, assimilated to human by dilution with water (see Playfair) and the addition of milk-sugar, is the best substitute for maternal milk. One ounce of milk-sugar dissolved in three quarters of a pint of boiling water, and mixed, as wanted, with an equal quantity of good new cow's milk,* should be given from the feeding bottle at the same intervals as recommended for maternal nursing.

No greater comfort has ever been invented for children, whether partially or entirely brought up by hand, than the modern feeding-bottle with elastic tube, but great care is required in the use of it. Absolute cleanliness is of the utmost importance, as any neglect of this is likely to produce illness.

*Milk as sold in towns, being often largely mixed with water, requires a smaller proportion of the latter to be added by the nurse. If good milk cannot be obtained, the Condensed Milk may be tried; but this often contains an excess of cane-sugar, which is absolutely injurious.

As soon as the meal is over, the tube should be removed from the child's mouth. He should not be allowed to fall asleep with it in his mouth. The bottle and teat should be thoroughly washed after each meal, and the former always kept in a basin of cold water when not in use. It must be repeated that a sweet feeding-bottle is of the greatest importance. It is well to have two bottles, so that one can be cleansed while the other is in use. Neglect of scrupulous attention to the feeding-bottle is a frequent cause of Indigestion, Marasmus, Thrush, etc.

Diet 3.—If, from poverty or scantiness of the breast-milk, a combination of nursing and feeding is necessary, the breast should be given twice a day. For the other meals the child should be fed on the diluted milk-sugar and unskimmed cow's milk, as prescribed in the previous paragraph; or the artificial diet may consist of new cow's milk diluted with about one fourth of warm water, so as to bring the temperature to that of breast-milk. This diet is infinitely preferable to any variety of starch food, and to the ill-selected additions to maternal milk often supplied at the fifth or sixth month. The popular notion that two milks do not agree is not sustained either by chemistry or practical investigation.

The result of hand-feeding may be accurately determined by the child's gradually increasing in weight from 200 to 400 grains daily.

If the child does not thrive on this diet, he may, after three or four months old, have milk in which a small quantity of gelatine and arrowroot have been boiled.

Food for Child Under Four Months of Age.*

[Substitute for Mother's Milk.—Fresh cow's milk, one-half pint; pure water, one-half pint; gelatine, one tablespoonful; sugar-of-milk, one teaspoonful; salt, one saltspoonful; lime-water, one tablespoonful. Let the water be hot, and in it dissolve the sugar and the salt; stir in the gelatine, and it will soon melt; now add the milk and the lime-water, stirring all well together, and it is ready to be put into the nursing-bottle.

If the child be under one month of age, the proportion of

*See "How to Feed the Sick," by Dr. Gatchell. Gross & Delbridge.

water should be increased. For very young children it is often well, also, to substitute the gum Arabic water for the gelatine. In the above recipe, use one teaspoonful of the gum arabic syrup in place of the tablespoonful of gelatine.

Gum Arabic Water.—Dissolve enough pure gum arabic in two ounces of water to make a thick syrup-like mucilage. Keep this in a wide-mouthed bottle, well corked.

Gelatine.—Cox's gelatine, one-half ounce; the white of one egg; pure soft water, boiling hot, one pint.

Soak the gelatine for about ten minutes in a teacupful of cold water; then pour on to it the boiling water, and stir until the gelatine dissolves. Beat well the white of one egg, and stir it briskly into the gelatine solution; put it on a slow fire, and stir gently till it boils; take off as soon as it boils; let it stand a minute, then strain well through a jelly-bag. When cool it will form into a stiff jelly. Keep this well covered and in a cool place.

One-third of a one-shilling package of Cox's gelatine is one-half ounce. Russian isinglass or Cooper's gelatine may be substituted by those who are accustomed to their use.

Lime-Water.—Get a piece of unslacked lime the size of an egg, break it up, put into a clean quart bottle, and fill up the bottle with rain-water. Let this stand over night; the next morning it is ready for use. There will still be a heavy sediment of lime in the bottom of the bottle, but the water will have taken up all that it can dissolve. When you have used all the water in the bottle, fill up again with water on the lime which remains, and repeat this again and again as long as the lime lasts. Do not shake the bottle, but use the clear lime-water off the top.

Food for Infants Over Four Months of Age.

In preparing food for infants over four months of age, the proportion of milk should be increased, and also we may add some preparation possessing nutritive value. This will be found in oatmeal-water and barley-water.

Oatmeal-Water.—Oatmeal; one teacupful; cold-water, one pint; salt, one saltspoonful. Stir the oatmeal and the salt into the water and let it soak over night, or all day. Strain thoroughly through a thick napkin. It is very important that this be

well strained, so as to leave no solid particles of oatmeal, as their presence in the child's food would irritate the bowels, and set up trouble which did not previously exist.

Barley-Water.—Pearl-barley, two tablespoonfuls; water, one pint; salt, one saltspoonful. Wash the barley and soak it half an hour in a little lukewarm water previously salted. Pour it into a pint of boiling water, letting it simmer one-half hour. When done, strain into a pitcher.

Now the baby's food may be prepared by adding to the milk oatmeal-water, or barley-water. For a single feeding, take of milk, one teacupful; barley-water, one teacupful; sugar-of-milk, one teaspoonful; lime-water, two teaspoonfuls. Heat this by setting the vessel in which they are mixed in a pan of hot water. When warm it is ready for the bottle.

These preparations of oatmeal and barley are nutritive, and at the same time, from their bland, mucilaginous character, they aid the digestion of the milk by preventing the formation of hard lumps of caseine.

Use the oatmeal-water if the bowels be inclined to constipation; the barley-water if the bowels be loose.]

Diet from Six to Twelve Months Old.

Diet 4.—When the mother gives evidence of indisposition or feebleness, and medical treatment fails to remove it, it is generally desirable to wean the infant at six months old, or even at the end of the first or second month. If the health of the mother and child be fairly good, the child may be nursed until it is nine months old. But if the child is very feeble, or suffering from any disease, it may be well to nurse it to the tenth or eleventh month, if the mother's health is robust, and she continues free from any symptoms of over-lactation. Beyond that time nursing is nearly always productive of serious consequences both to the mother and child. When weaning is decided upon, the mother should gradually diminish the allowance from the breast, and increase the supply of suitable kinds of food; at length she should only suckle him once or twice in the twenty-four hours, and otherwise feed him at proper intervals.

When weaning is commenced, or when the mother's breast-

milk requires supplementing, one of the farinaceous foods will be found a most valuable substitute. Every mother has her own opinion as to which food is the best. Mellin's is certainly one of the best. It should be mixed, in the proportion given on each can, with cow's milk of pure and good quality, and given at a uniform temperature, namely, that of maternal milk.

Diet 5.—For a weaned child above nine months old the following arrangement may be adopted.

First Meal, 7 A.M.—A breakfast-cupful of prepared food, prepared as directed on the tin. If the bowels are confined at any time, a rather larger portion of the food, and less of the milk, should be used; or the reverse if the bowels are relaxed.

Second Meal, 10:30 A.M.—A breakfast-cupful of milk. A teaspoonful of lime-water may be added when the milk has appeared to produce discomfort.

Third Meal, 2 P.M.—The yolk of one egg, well beaten up in a teacupful of milk.

Fourth Meal, 5:30 P.M.—Same as the first.

Fifth Meal, 10 P.M.—Same as the second.

Diet 6 (to alternate with the above).—First Meal, 7 A.M.—A dessert-spoonful of pearl-barley jelly* dissolved in a breakfast-cupful of warm milk, and slightly sweetened with loaf-sugar, or a small basinful of milk-porridge, may constitute the meal.

Second Meal, 10:30 A.M. –A breakfast-cupful of milk, to which, if necessary, a teaspoonful of lime-water is added.

Third Meal, 2 P.M.—This may consist of a small egg-pudding, made as follows:—Beat up one egg with a teaspoonful of flour and sufficient milk to fill a basin rather larger than a teacup; tie the basin and its contents in a cloth, and boil for twenty minutes. It may be taken with a little milk, sugar, or gravy. As the child grows older, more flour may be added. Or the meal may consist of a small teacupful of beef-tea† (half a pound of meat to the pint) and a rusk or piece of stale bread.

*Pearl-barley boiled for six hours forms, on cooling, after the water has been strained off, a jelly which dissolves readily in warm milk.

†Beef-tea may be made in the following way: Put half a pound (or a pound, according to the strength required) of rump steak, cut up into small pieces, into a covered enamelled saucepan with one pint of cold water. Let

Fourth Meal, 5:30 P.M.—A teacupful of farinaceous food, carefully prepared as directed in Diet 5.

Fifth Meal, 10 P.M.—Same as the second.

No food of any kind should be given between the meals, which should, therefore, be made sufficiently large to meet the requirements of the system, always stopping short of over-repletion. A healthy child from ten to twelve months old requires from a pint and a half to a quart of milk in the twenty-four hours.

From Twelve to Eighteen Months Old.

Diet 7.—First Meal, 7:30 A.M.—A rusk or a slice of stale bread with a breakfast-cupful of new milk. The bread may be soaked in the milk; but if the child has teeth, it should be well masticated dry, and milk taken in sips. The teeth and gums are improved by proper employment.

Second Meal, 11 A.M.—A drink of milk, with a plain biscuit or thin slice of bread-and-butter.

Third Meal, 1:30 P.M.—A pudding like the one recommended for the third meal in Diet 6. Or, as a variety, a teacupful of good beef-tea (a pound of meat to the pint) or of beef-gravy, with rusk or stale bread. A good table-spoonful of light farinaceous pudding may follow the beef-tea.

Fourth Meal, 6 P.M.—Same as the first.

Diet 8 (to alternate with the preceding).—First Meal, 7:30 A.M.—The yolk of a lightly-boiled egg. A thin slice of bread-and-butter. A cupful of new milk

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this stand in a cold or cool place for four or five hours, and then by the side of a fire till temperature should approach but not reach the boiling-point. It is then fit for use.

The meat used should be freshly-slain, and divested beforehand of all fat and gristle; otherwise a greasy taste is given to the beef-tea, which cannot be afterward removed by skimming. Only enamelled saucepans should be used. In re-warming beef-tea which has been left to cool, care must be taken to warm it only up to the point at which it is to be served. On no account should it be allowed to boil.

When children, from long use of it, become tired of beef-tea, it may be seasoned with some vegetable product—celery, or celery-seeds, which should be strained off before using—when, possessing an entirely new flavor, it will generally be eaten with zest.

Second Meal, 11 a.m.—A drink of milk and a thin slice of bread-and-butter.

Third Meal, 1:30 p.m.—A mealy potato, well mashed with a spoon, moistened with gravy from the cut-joint. A cupful of new milk.

Fourth Meal, 6 p.m.—A rusk or slice of stale bread, well soaked in a breakfast-cupful of milk. But if the child can be trusted to masticate, the bread may be eaten dry.

In cases of debility, or when there exists any exhausting discharge, a little milk may be given at about 10 p.m. But in good health nothing is required after 6 p.m. The sooner a child becomes accustomed to sleep all night without food the better. When, however, he wakes in the morning, refreshed by his night's rest, he should not be compelled to remain fasting for an hour or more, but his breakfast should be prepared at once.

Many children between twelve and eighteen months old, who take large meals, will be found to do well upon only three meals a day, as in the following:

Diet 9.—First Meal, 8 a.m.—Some farinaceous food in three-quarters of a pint of new milk.

Second Meal, 1 p.m.—A teaspoonful of baked flour; one teaspoonful of fine oatmeal; three-quarters of a pint of boiling milk; the yolk of an egg. The baked flour and the oatmeal should be beaten up till smooth with four table-spoonfuls of cold water; the milk and the yolk-of-egg (well beaten) should then be added, and the mixture boiled till it thickens.

Third Meal, 5:30 p.m.—Same as the first.

If the child requires anything early in the morning, or at 10 p.m., half a teacupful of milk and a plain biscuit or a thin slice of bread-and-butter.

From Eighteen Months to Two Years Old and Upwards.

Diet 10.—First Meal, 7:30 a.m.—A breakfast-cupful of new milk. A rusk, or a good slice of stale bread.

Second Meal, 11 a.m.—A cup of milk.

Third Meal, 1:30 p.m.—A small slice of underdone roast mutton, one well-mashed potato, with a little gravy as it runs from the cut-surfaces of the joint, without fat. If the child bolts

his meat, it should be pounded in a mortar till he can be trusted to divide it with his teeth. For drink, water or milk-and-water.

Fourth Meal, 6 p.m.—A breakfast-cupful of milk and bread-and-butter. A healthy child, after the age of eighteen months, should sleep from 6 p.m. to 6 a.m. without waking, and require nothing beyond the above.

Diet 11 (for a child of the same age).—First Meal, 7:30 a.m. —A breakfast-cupful of new milk, the lightly-boiled yolk of one egg, and a slice of bread-and-butter.

Second Meal, 11 a.m.—A teacupful of milk.

Third Meal, 1:30 p.m.—A breakfast-cupful of beef-tea (a pound of meat to the pint), containing a few well-boiled asparagus-heads, when in season, or a little stewed flower of broccoli. After the beef-tea a good table-spoonful of plain custard or farinaceous pudding.

Fourth Meal, 6 p.m.— Bread-and-butter, with a breakfast-cupful of milk.

These diets may be given on alternate days, or otherwise varied as necessary.

Between the Ages of Two and Three Years the same diets may be continued. Meat may, however, be now given every day, and a little well-stewed fruit, marmalade, etc., be occasionally added to the diet.

The morning and evening meals should always consist principally of Milk. Tea and coffee should be entirely withheld from young children. Indeed, these beverages are better not given at all till after adult age. Cocoa, however, properly prepared, is a suitable beverage at any period of life.

[For diet in sickness, see Part VI.]

CHAPTER III.

DISEASES OF THE DIGESTIVE SYSTEM.

Tongue-tie.

On the under surface of the tongue there is a fold of tissue-like mucous membrane, called the *frænum linguæ*, which connects the tongue with the floor of the mouth. Congenital tongue-tie is said to exist when the attachment of the frænum extends along the whole under surface of the tongue to its tip. But this condition is extremely rare, and, even when it exists, seldom gives rise to any real inconvenience. The difficulty of speech with which it is sometimes associated proceeds from deeper causes, involving the sensorium. When, however, the attachment of the frænum is very thick and extensive it may form a mechanical obstacle to sucking, by rendering it impossible to produce the necessary vacuum in the mouth. When, therefore, any difficulty of sucking exists, the state of the frænum linguæ should be examined, and, if necessary, divided. The little operation may be performed as follows: The infant should be made to cry, by which act the frænum will be fully exposed; then, by means of a pair of round-ended scissors, keeping the points towards the back of the mouth, a very light notch only should be made. The backward direction of the scissors, and the small extent of the snip are necessary to avoid wounding the artery of the frænum, an accident that might give rise to serious hæmorrhage.

Inflammation of the Mouth.

Symptoms.—Heat, redness, and ulceration of the mucous membrane of the mouth; slight swelling and pain of the tongue, cheeks, gums and palate; fœtid breath, and salivation may also be present.

Treatment.—This disease is most frequently amenable to the action of Kali Chloricum, but other remedies are sometimes called for. A dose of the medicine should be given three times a day.

Indications for the Remedies.—*Hydrastis.*—Swelling, dark redness, and soreness of the tongue, gums and cheek; ulceration of the lips and tongue; tenacious mucus in the mouth.

Kali Chlor.—Great soreness, fœtid breath, and ulceration; especially after the allopathic use of mercury.

Mercurius Sol. 3x.—Slight cases; fœtid breath and an abundant flow of watery saliva.

Accessories.—The mouth should be moistened frequently with thin barley-water, or with glycerine and water (one teaspoonful of glycerine to a large wineglass of water).

Cancrum Oris—Canker of the Mouth.

Definition.—A sloughing or gangrenous ulcer of the mouth, occasionally occurring in ill-fed children from two to six years old, residing in low, damp situations, or living in overcrowded rooms and breathing impure air.

Symptoms.—The inflammation generally begins at the edges of the gums opposite the incisors of the lower jaw; the gums are white and spongy, and separate from the teeth, as if Mercury had produced its specific effects. Ulceration begins and extends along the gums until the jaws are implicated; and as the disease advances, the cheeks and lips swell, and form a tense, indurated tumefaction. The teeth are apt to fall out, and the breath to become intolerably fœtid, from a grangrenous condition. There is generally enlargement and tenderness of the submaxillary glands. In severe forms of the disease, the destructive process rapidly extends, so that in a few days the lips, cheeks, tonsils, palate, tongue, and even half the face may become gangrenous, the teeth falling from their sockets, a horribly fœtid saliva and fluid flowing from the parts (*Aitken*).

Treatment.—Mercurius is generally the specific for this affection. A dose may be administered three or four times a day. Next to Mercurius, Mur.-Ac. has been found most efficacious.

Indications for the Remedies.—*Ars.*—Extensive disorganizations of the mouth, extreme prostration.

Merc.-Sol. 3x.—The most useful remedy; will rarely fail to prove efficacious, if the disease has not been caused by any preparation of Mercury

Mur.-Ac.—When the disease is associated with other diseases, such as measles, pneumonia, etc.

Sulph.-Ac.—Rapid spread of ulceration.

Sulph.—In chronic cases.

Accessories. — The gums, teeth, and mouth should be frequently cleansed with a weak lotion of carbolic acid and water (about ten drops of the former to a tumbler of the latter). Strong beef-tea, raw eggs beaten up in milk, and occasionally wine, are generally necessary.

Sore Throat.

Definition.—Inflammation of throat unaccompanied by Quinsy or Ulceration.

Symptoms.—Throat red at first, then studded over with white or yellow spots, little or no swelling, pain on swallowing, fever.

Cause.—Exposure to cold.

Treatment.—*Aconite* should be given at once—a dose every two hours. If it does not act favorably in a few hours, Belladonna will probably be called for.

Indications for the Remedies. — *Aconitum.* — Dryness, roughness, and heat in the throat, with a choking sensation, hoarseness, fever.

Belladonna.—Bright-red throat, feeling as if scraped raw, with pain on swallowing.

Dulcamara.—If from getting wet, or from damp, foggy air.

Mercurius Sol.—Sensation as of a lump in the throat, worse at night, increased flow of saliva, white or yellow spots on throat.

Accessories.—Frequent sips of cold water; steaming the throat; compress to the throat.

Thrush—Sore Mouth.

Definition.—An inflammatory product, consisting of numerous minute vesicles, resulting in white patches, on the lining mem-

brane of the mouth and throat. The white patches are now known to be certain microscopic parasitic plants —the *Leptothrix buccalis*, and the *Oidium albicans*—the sporules of which increase with great rapidity, and form tubular fibrils. There is also an increased formation of epithelial scales. The unhealthy secretions of the mouth, particularly when acid, form a nidus for the vegetation.

Causes.—Unhealthy character of or insufficient breast-milk; unsuitable quality or quantity of food given to infants fed with the bottle or spoon, neglect of general cleanliness, bad drainage, etc. A scrofulous constitution may operate as a predisposing cause. The disease also occurs during the course of Measles, Enteric fever, and Consumption; it is then generally indicative of an early fatal termination.

Symptoms.—There is generally some febrile disturbance; the child is fretful, often refuses the breast on account of pain experienced in sucking; there is usually vomiting, and a thin, watery diarrhœa, caused by deranged intestinal secretions. The local symptoms consist of innumerable white specks, like little bits of curd, which are sometimes so connected as to form a continuous, dirty, diphtheritic-like covering over the tongue, gums, palate, and inside of the cheeks and lips. In severe cases, vegetations line the whole interior of the mouth, and extend even to the fauces and down the gullet; the nates also become red and excoriated by the acrid excretions; the parasitic plants, however, are not developed on the interior of the stomach or bowels, but are restricted to those portions of the mucous tract which are studded with scaly epithelium.

Prognosis.—In children otherwise strong, Thrush, which is caused by improper food or want of cleanliness, may be readily cured by one or more of the following remedies, and by correction of the faulty hygienic condition. If it occurs as a complication in the course of an exhaustive disease, or after a lengthened course of improper food, in which the digestion and assimilation of nourishment must be necessarily imperfect, the prospect of recovery becomes proportionately diminished. Diarrhœa, too, is by no means infrequent, especially in feeble children, and increases the gravity of the case.

Treatment.—Borax and Mercurius are the chief remedies for this disease. The latter is perhaps more often employed than the former. The medicine selected should be given three times a day.

Indications for the Remedies.—*Arsenicum.*—Dark color of the patches; offensive odor from the mouth; severe diarrhœa and great constitutional prostration.

Borax.—Child's rest is much disturbed, ptyalism, the aphthæ bleed freely.

Mercurius Sol.—Dribbling saliva, offensive breath, diarrhœa; if administered when the white specks first appear, it is often alone sufficient.

Sulphur.—In convalescence, and when there are eruptions on the skin.

Accessories.—The child's mouth should be washed with a weak solution of Borax (ten grains to one ounce of water), by means of a soft brush, two or three times a day. Before using the lotion the mouth should be well cleansed with a piece of linen rag squeezed out of warm water, or equal parts of vinegar and water may be substituted for the Borax in some cases.

A point of first consideration is suitable diet. If Thrush be distinctly traceable to any disease in the mother which cannot be quickly cured, the infant should be at once provided with a wet-nurse, or weaned, and fed with Milk Sugar or cow's milk, diluted with water.

Prevention.—Every variety of starch-food is unsuitable for an infant, and no food but breast-milk, or cow's milk diluted, should be used. Cane-sugar, which speedily ferments and is favorable to the development of the disease, is not to be allowed. Strict cleanliness is particularly necessary. After each meal the mouth should be washed, to prevent the accumulation of milk about the gums. This simple measure will often prevent the appearance of Thrush. In like manner, the mother's nipple should be cleansed each time after giving it to the infant. Well-ventilated rooms, and abundance of out-of-door air, every day, in suitable weather, will prove of extreme value, rendering the secretions more healthy, and raising the tone of the general system.

Disorders of Dentition.

To enable our readers to recognize the disorders of Dentition (in itself a natural process), we shall briefly sketch the progress of healthy teething. There are two sets of teeth: the first—the milk teeth—appears during the first two years of life, and falls out about the seventh or eighth year. As the first set falls out it is replaced by the permanent, which is not completed till adult life.

The milk teeth generally appear in the following order:—About the sixth month the two middle incisors of the lower jaw, followed in a few weeks by the corresponding incisors of the upper jaw; next appear the two outside incisors of the lower jaw; and soon after those of the upper; after another interval of perhaps about two months, the first four molars, then the eye-teeth, and, lastly, four other molars, completing, by about the second year, the teeth of the first set. Should there be any little deviation from this order, or should dentition be a little prolonged, no great importance need be attached to it.

Although Dentition is a natural process of development, in many children it is a trying one, and may even call into fatal activity latent tendencies to disease. In consequence of the increased activity and excitement in the vascular system, combined with the nervous irritation which sometimes attends Dentition, local or constitutional disturbances are likely to arise in delicate or strumous children. Rickets, for example, greatly influences the progress of teething. If this disease sets in previously to the commencement of Dentition, the evolution of the teeth may be almost indefinitely delayed; or if some are already cut, further progress may be arrested. Rickety children of eighteen months or two years old may often be seen with very few teeth, and those few black and carious. In Tuberculosis and congenital Syphilis, on the other hand, the teeth are cut early, and before the frame is sufficiently consolidated to sustain the necessary changes.

Symptoms.—Cough, with wheezing breathing; restlessness, starting, as if in fright, or interrupted sleep; sudden occurrence of febrile symptoms; hot, swollen, or tender gums, and increased flow of saliva; various eruptions on the head or body; derange-

ment of the digestive organs—sickness, Diarrhœa and other symptoms of Indigestion—are most frequent in the summer and autumn, and when, therefore, children are most exposed to sudden changes.

Causes. — Strumous constitution; Rachitis. The exciting causes are irregular feeding; excessive feeding; improper quality of food. Disordered Dentition is often coincident with a change of diet from the mother's milk to various articles which are unsuited to the age of the child. Other causes are—keeping the head too hot, too little out-of-door air, etc. By such means the nervous system is disturbed, the stomach is disordered, and restlessness, crying, Colic, and even Convulsions, follow. Inflammatory affections of the gums, or disproportion between the jaw and the number and form of the teeth, are also causes of suffering. Frequently these causes may be avoided, and the sufferings of Dentition reduced to a minimum, even in strumous constitutions.

Not a few cases of disordered dentition are referable to the mother. Worry, fits of anger, overheating, fatigue, etc., may so poison the blood of the mother that, unless the milk be first withdrawn, and nursing suspended until physical and mental calm be restored, convulsions, fever, diarrhœa, or even sudden death, may result.

Treatment.—*Chamomilla* is an excellent medicine for most cases of disordered dentition, and, in the absence of fever, should be considered. It may be given every two or three hours.

Leading Indications. — *Aconitum.*—Feverishness, restlessness, inflamed gums.

Calc.-Carb.—Cases complicated with slimy diarrhœa; in scrofulous patients.

Chamomilla. — Bilious purging, intestinal irritation, cough, nervousness, and fretfulness.

Kreasotum.—In cachectic children; agitation and wakefulness; gums inflamed; constipation; teeth decay as soon as they appear.

Arsen. (with much emaciation); *Bell.* (flushed face, nervous irritability); *Merc.-Sol.* (green or bloody motions); *Podoph.* (pain in paroxysms, with Prolapsus Ani); *Sil.* (much perspiration about the head when falling asleep.)

Accessory Treatment.—Regularity in the times of feeding

and sleep; correction of any habits in the mother which may affect the child unfavorably; restriction to suitable quantities of food at one time. Mellin's food prepared according to the directions accompanying it is generally the best artificial food for infants. Keeping the head cool and the feet warm, washing the child daily in cold water, and allowing it to be much in the open air, tend to prevent determination of blood to the head.

Decay of the Teeth.

The function of the teeth is so important that it is impossible to overestimate the necessity of exercising due care in their management during the whole period of childhood. A good set of teeth is one of the best guarantees a child can possess of good digestion and prolonged health; and this blessing it is generally possible to attain by the exercise of early care. A large proportion of the patients who come under our observation, including persons of all ages, suffer from a more or less deteriorated state of the teeth and gums. Our opportunities of investigating this subject have been extensive, for it is one of the points upon which we make definite inquiry, more especially in cases of indigestion and defective nutrition. Our own observations are confirmed by dentists of long practice, who have noticed the increasing prevalence of carious teeth.

Causes.—The early decay of the teeth is due, in a great measure, to preventable causes, the chief of which are the following:

1. *A Crowded State of the Teeth.*—In some children the jaws are so small or irregular that there is not sufficient room for proper development. The consequence is that they overlap, and, pressing against each other, damage the enamel. Moreover, in this condition there is greater probability than in a normal condition that particles of food will be retained in the mouth, and decomposing, the formation of caries will be favored.

2. *Insufficient Use of the Teeth.*—This is consequent on the kind of food taken, and on its preparation. The prevalent use of sops and of soft new bread is productive of much evil. Nothing is more suitable for a child, with the incisors cut, than a crust of stale bread, or a bone, on which to exercise and harden the teeth

and gums. The result of insufficient use of the teeth is that the jaws are imperfectly developed, the gums become soft and spongy, the teeth grow irregularly, are easily loosened, and drop out. For it is with the teeth as with all other organs and functions of the body—the less they are employed for the purposes to which they are assigned, the more rapidly they become enfeebled and degenerate. Resistance gives strength. The resistance of tough food affords that healthy pressure which promotes circulation in the vessels, gives fixedness to the teeth, and necessitates the formation of that hard texture which wears well even when the enamel is gone.

3. *Constitutional Debility.*—Whatever enfeebles the general system enfeebles every part of it. If the standard of health be lowered by disregard of hygienic measures, or in any other manner, the teeth will suffer; they will decay for want of sufficient nutrition.

Indications for Treatment.—*Kreasotum.*—Sour state of the secretions of the mouth and stomach, with frequent vomiting; soreness of the gums.

Mercurius Sol. 6.—Looseness of the teeth; retraction and bleeding of the gums; excessive flow of saliva; fœtid breath.

Silicea. –Soft, crumbly state of the teeth, associated with symptoms of Rickets.

Staphysagria.—Blackness of the teeth; paleness, swelling, soreness and erosion of the gums; looseness of the teeth.

Preventive Treatment.—This may be inferred from the causes already mentioned. To prevent the crowding of the teeth, an experienced and skillful dentist should be consulted, who will remove superfluous teeth, selecting for extraction any that may be hopelessly decayed, or those which are most liable to early degeneracy, viz., the first permanent molars. We have repeatedly advised this course, with the most satisfactory results. Personal appearance has been improved by the greater regularity of the teeth; for the vacancies occasioned by removals have been quickly filled by the adjustment of the teeth to the vacant spaces. To prevent deterioration, we recommend a return to the primitive custom of eating coarse meal bread. It gives the healthy stimulus which the teeth and gums require; it is more nutritious to the

system; and it supplies in considerable quantity the silica and phosphates from which enamel and dentine are formed. We also advise parents to allow their children the vulgar gratification of nibbling a bone now and then. Sweets should only be allowed in moderation, for they injure the teeth; not, as is usually supposed, by direct chemical action, but by disturbing digestion, and vitiating the secretions of the mouth. Very acid fruit acts both directly and indirectly upon the substance of the teeth; strong acids, some of the preparations of iron, and hot drinks are also prejudical. Cleanliness is essential to the prevention of decay. The bristles of the tooth-brush should be moderately soft, and not too thickly set. Where food is liable to become entangled between the teeth, the brush should be used after every meal. Not only animal food, but particles of white bread originate degenerative changes, and should be removed. Tooth-powder is unnecessary except after the teeth have been neglected; it may then be required for a short time to remove carious incrustations. In any case the tooth powder should not be harsh or medicated. Such as feels rough and gritty when rubbed between the thumb and finger should not be used, as it will scratch and injure the enamel. Brushing with simple water should be commenced directly the teeth appear, and nothing else is necessary in the case of children. Friction is beneficial to the gums, the removal of decomposing particles of food tends to avert premature decay, and cleanliness is as healthful in the mouth as in any other part of the body.

Another method of preserving the teeth is the one so forcibly recommended by Mr. Catlin sleeping with the mouth shut. Children should be initiated into the habit at the very earliest period. They should also be taught to keep the mouth shut as much as possible during the waking hours. This habit contributes much to the end contemplated. Finally, a simple style of living, fresh air, exercise, and cleanliness during the whole period of childhood will facilitate healthy growth, and aid largely in the preservation of the teeth.

Simple Vomiting.

The vomiting of infants may be devided conveniently for our purpose into two kinds—simple and chronic, the former being most common.

When the milk is rejected immediately after nursing or feeding, the milk being curdled, it is of the simple variety, and is caused either by too frequent feeding or over-distention of the stomach. Vomiting of uncurdled milk indicates debility of the stomach, and requires a carefully regulated diet, smaller quantities of food at a time, and at shorter intervals.

Causes.—Repletion; improper or badly prepared food; premature weaning; the use of starchy food before the child is able to digest it. Wet-nurses unable fully to supply the wants of the suckling have been known to supplement the breast-milk by arrow-root, corn-flour, and other indigestible food, to meet the deficiency. In such cases the use of the microscope reveals starch granules, and thus enables us to detect the cause of the derangement. Impure air, too little sunlight, want of cleanliness, and other bad hygienic conditions, are fertile sources of Vomiting. The crowding of a whole family in one room, or the crowding of many children in a small, badly-ventilated, ill-lighted, and cold-room, is not an uncommon cause of the derangement.

Indications for Treatment.—*Antimonium Crudum.*—Thickly-furred, white tongue; great thirst; painfulness of the stomach to pressure; nausea; eructations; poor appetite; vomiting of bile, with Diarrhœa.

Ipecacuanha.—Aversion to food and vomiting of mucus. This is especially suitable when the breast-milk disagrees with the child, and is returned.

Nux Vomica.—Aversion to food and drink; the matters vomited are sour or fœtid; vomiting of green bilious matter; Constipation.

Pulsatilla.—Simple vomiting from indigestible food; or when due to debility of the stomach.

Accessory Treatment.—A change of diet is generally necessary in hand-fed or weaned children, and a change of the mother's diet, or of her habits, in the case of those who are fed by the breast. Suckling infants should be nursed at regular periods, and should not be permitted to suck too long at one time, the amount permitted to be swallowed being regulated by the previous meal. If that has been rejected, the quantity at the next must be lessened. In some cases the child should have a wet-nurse or be fed with Sugar-of-milk, as elsewhere directed, or with

cow's-milk and lime-water, given in such quantities as can be retained. In the case of older children much care is often necessary. When a disposition to sickness has been excited the stomach will only bear small quantities of food at a time—very much smaller than are commonly given; while warm food is sometimes much better tolerated than cold. Small pieces of ice placed on the tongue tend to allay vomiting, and are usually very grateful to the little patient. After vomiting, it is better to make no attempt for an hour or two to give any kind of food or drink. After some rest, a teaspoonful of cold water may be given, and followed in ten or fifteen minutes by a very little cold milk-and-water, or whatever else may be suitable. Another point, of considerable importance during sickness, is to avoid moving the child hastily or roughly in giving it food, or raising it more than is absolutely necessary out of the lying posture.

After the child is a week or two old, during favorable weather, abundance of pure open-air and sunlight will improve the tone of the digestive organs. Even as soon as the infant is one or two weeks old it may be taken out-of-doors. Strict cleanliness is necessary, and the whole body should be sponged at least once a day in cold or tepid water. The child should be warmly clad, the feet especially being kept warm.

Chronic Vomiting.

Symptoms.—Chronic vomiting generally comes on slowly, and without fever, differing in these respects from common Simple Vomiting, which is accompanied by heat of skin, thirst, and a loaded tongue. At first the child vomits, at irregular intervals, curdled milk of a strong, sour smell, showing by its yellow or green tinge the presence of bile. After a time the matters vomited look like clear water mixed with food. The belly is full, hard, and tender; sour or fœtid eructations occur, and the bowels are obstinately constipated. The child grows thin, pale, and fretful; and the fontanelles sink considerably. Occasionally Diarrhœa intervenes, then leaves the bowels as obstinate as ever; the motions being passed with great difficulty, and consisting of light-colored, hard, round lumps, covered with tough mucus. The tongue is now coated with dirty yellow fur, and dry; the

breath smells sour; the lips are red, and lack moisture; the mouth is clammy and parched, and the lips appear to project.

This condition may continue for weeks, or even months, slowly passing into the next stage, when vomiting occurs much more frequently, and is occasioned by the slightest movement. The milk is rejected uncurdled; emaciation progresses rapidly, the skin becomes harsh, dry, and flaccid, the features pointed, and the knees are drawn up on the abdomen.

The temperature sinks very low, and the child lies with eyes half-closed in a semi-stupor; Thrush appears; and the worn-out sufferer sinks to rest.

Causes.—Too early weaning; the premature use of starchy kinds of food; and other conditions enumerated under "Chronic Diarrhœa."

Diagnosis.—Chronic Vomiting, combined with obstinate Constipation, may arouse suspicion of brain disease; the following table, however, shows the differences between these conditions:

Tubercular Meningitis.	Chronic Vomiting.
1. Seldom occurs in children under one year.	1. Is most frequent in young infants.
2. Elevation of temperature.	2. Depression of temperature.
3. Fontanelles prominent and frequently pulsating.	3. Fontanelles depressed and motionless.
4. Pulse irregular.	4. Pulse feeble and regular.
5. Abdomen retracted.	5. Abdomen tumefied.

Indications for Treatment.—*Arsenicum.*—Dryness of the mouth, with bitter taste and disagreeable odor; Thrush; ulcerated, coated, or cracked tongue; vomiting after food of watery fluid; great tenderness and Colic; prostration and emaciation; watery diarrhœa.

Calc.-Carb.—Chronic Vomiting, with swelling and hardness of the bowels, and constipated or offensive motions. Very suitable to small or weakly children.

Kreasotum.—A poor constitution, general ill-health, and persistent vomiting.

Nux Vomica.—This is an excellent remedy in some forms of Chronic Vomiting.

Pulsatilla.—Tongue covered with whitish mucus; vomiting of

mucus or bile; mucous Diarrhœa. Most useful for fair children with blue eyes

Veratrum Alb.—Excessive Vomiting, especially with watery, nocturnal or involuntary Diarrhœa; slow pulse; faintness; coldness of the face, tongue, and extremities.

Accessories.—Due care should be at once taken that the child is properly clothed and fed. The clothing should be sufficient to secure comfortable warmth. If he has been prematurely weaned, and it is impossible to procure a suitable wet-nurse, the child should have equal parts of fresh cow's milk and water; or fresh whey and cream (one tablespoonful of cream, two of whey, and two of hot water). In obstinate vomiting the food should be given cold or cool. Much injury often results from careless nurses giving food too hot. The body of the child should be sponged once a day with tepid water, and afterwards rubbed with olive oil. The greatest cleanliness should be observed, and all vomited matters or soiled clothes removed immediately.

In case of extreme prostration, small doses of brandy may be given, one to five or ten drops, according to the age of the child, in a teaspoonful of cold water; also cold beef-tea, in small quantities, frequently repeated. For this purpose, the beef-tea may be prepared as follows: To a pint of cold water, add a pinch of salt and ten drops of Muriatic Acid, first decimal dilution. Cut up fine eight or ten ounces of lean beef, and stir among the liquid. In an hour strain with gentle pressure through a fine cloth or hair sieve. For children over twelve months old, the whites of one or two eggs may be thoroughly mixed with the liquor.

Acute Infantile Diarrhœa.

The frequency of Diarrhœa in early childhood, especially during dentition, its disastrous effects on the constitution, if unchecked, and its large contribution to infantile mortality, especially in summer and autumn, render the due consideration of the subject of great importance. Depending, moreover, as it often does, on obvious and removable causes, and unaccompanied by lesions other than functional or transient, it is a disorder that well repays the application of our preventive and curative resources.

Varieties.—Diarrhœa in childhood presents many phases, and has been described under numerous headings,—simple, catarrhal, non-inflammatory, choleraic, inflammatory, and dysenteric. Simple Diarrhœa, or excessive fluid evacuations, when sudden, profuse, and frequent, becomes choleraic. When mucus from the large intestine accompanies the fæcal discharge (a complication which usually takes place if the Diarrhœa persists) it becomes inflammatory; and if irritation and straining be superadded, it is termed dysenteric. But as these varieties chiefly differ in severity and duration, one often passing insensibly into another, we shall arrange our treatment of them under two headings—acute and chronic.

Causes.—The circumstances which may develop an attack of Diarrhœa are numerous, and their detection often necessitates much care; but as the cause generally influences the treatment, it should always be investigated. The most fruitful source of Infantile Diarrhœa is improper food, especially farinaceous, which is often most unwisely given almost as soon as the ability to swallow exists. The constant passage of indigestible starchy masses along the intestinal canal causes irritation to the sensitive mucous lining, which sooner or later expresses itself in Diarrhœa. Sour milk is a frequent cause, especially among the poor. So is an inferior quality of maternal milk, such as of women in whom the monthly period has returned, or whose milk is otherwise deprived of its nourishment. Sugar is also hurtful, particularly when given too freely in milk when the mother is unable to nurse. When the milk is unsuitable the stools first resemble chopped eggs; and afterwards bad eggs; and the child suffers much from wind and colic, emitting flatulence which smells like rotten eggs. Dr. Lade says "he finds the milk of the cow, without the addition of sugar, preferable to the two together." One of the earliest causes of this disorder, as the same gentleman points out, is the highly reprehensible practice of some nurses giving castor-oil, or a bolus of butter-and-sugar, soon after the baby is born. Foul air and contaminated water, the inevitable results of filth and overcrowding, are causes of an obstinate form of Diarrhœa. In fact, Diarrhœa and infantile mortality are largely augmented by neglect of efficient sanitary measures,

especially the effluvia or emanations from drains or decaying vegetables, and other refuse which may pollute the air and food, and set up irritation.

Further, heat, and other atmospheric conditions, especially in summer and autumn, exercise a prejudicial influence, and directly tend to develop or increase an attack of Diarrhœa.

Symptoms.—These vary extremely, even in recent and acute attacks, from a slight, painless increase in the quantity, frequency, and altered consistence of the normal evacuations, to violent, painful, and frequent purging; liquid evacuations, perhaps several times every hour, being ejected with spasmodic force. In the latter cases the motions are green or spinach-like, resembling those produced by administration of mercury, but assume a yellow appearance during recovery. Frequently they contain the caseine of undigested milk in the form of numerous white specks. In the more severe stage, they are sometimes streaked with blood, and mixed with mucus. There is also generally sickness, thirst, and an interruption in the nutritive processes. Acute Diarrhœa rapidly reduces the firmness of the muscles, and if the drain be severe, in two or three days there is a marked loss of flesh and strength. The eyes are sunken, the features pinched and livid; the pulse rapid, feeble, and nearly imperceptible; and the extremities cold and shrunken. On the other hand, after the cessation of an acute attack, the lost flesh and vigor are quickly regained, and the child soon recovers his wonted color and spirits.

Treatment.—Slight attacks from evanescent causes may be left to themselves; the relaxation may be beneficial, effect its own cure, and cease spontaneously in a day or two. As soon, however, as it begins to pass the limits of health, and act injuriously, remedial and corrective measures should be instituted.

Indications for Treatment.—*Arsenicum.*—Neglected or advanced cases, in which there is aggravation at night, and unquenchable thirst: when the various measures employed seem useless, and the pale, sunken face gives evidence that the disease is making serious inroads, Ars. often succeeds. But it is more often required in chronic than in acute Diarrhœa.

Chamomilla.—Diarrhœa during dentition, or from cold, with fretfulness or restlessness; colicky pains; greenish, watery, frothy,

and offensive evacuations; yellowness of the whites of the eyes, and sallow skin.

Ipecacuanha. — Simple Diarrhœa, with straining or blood-streaked motions, from overloading the stomach, or during hot weather with sickness, the latter symptoms being more marked than the Diarrhœa.

Iris. — Bilious evacuations, with sickness: Cholera Infantum, especially when vomiting is frequent.

Mercurius Corr. — Evacuation containing blood, and passed with excessive straining.

Mercurius Dulcis.—Stools green, whitish, clay-colored, watery, or mixed with mucus; straining, nausea, and thirst.

Podophyllum.—Profuse, sudden, fœtid, exhausting discharges, worse in the morning and forenoon; frequent retching without vomiting; drowsiness; rolling and perspiration of the head; moaning and restlessness; Diarrhœa better at night.

Veratrum Album.—Choleraic Diarrhœa, with frequent, copious, watery discharges, occurring in gushes, and accompanied by excessive Vomiting and prostration; spasmodic drawing up of the legs, cold sweat on the forehead, and coldness of the abdomen. This remedy is often valuable after others have been uselessly administered.

Accessories.—In the first place, an attempt should be made to correct Diarrhœa, even in its mild form, by the removal of its cause. In the majority of cases we believe this will be found in the diet. Farinaceous food, which should not as a rule be given until after the teeth have appeared, is a common cause of intestinal irritation.

Should a substitute for maternal milk be necessary, the best is cow's milk with the addition of milk sugar as recommended. Lime-water in some cases may be substituted for milk sugar, and added in the proportion of a tablespoonful to a feeding bottle which holds about six ounces. In addition to its nutritive value, lime-water tends to keep the milk sweet. The temperature of food is also very important; it should be given cold, or even iced in feverish states. Cold milk and lime-water will often suffice to arrest an attack, when warm would be wholly useless. When sickness is superadded to the Diarrhœa, and is troublesome, all

preparations of milk may have to be suspended for a few hours, and whey, veal broth, water, or barley-water, substituted; and this, again, followed by beef-tea, or other kind of animal broth. The application of a broad flannel binder to the abdomen, particularly during Dentition, is very serviceable, and expedites a cure. It should extend from the waist over the hips.

When Diarrhœa is due to congestion caused by excessive heat, cold affusions alone will arrest the discharge.

In grave cases of Diarrhœa, with tendency to failure of the pulse and collapse, small doses of brandy are necessary. Ten to twenty drops with milk, or milk and lime-water, may be given every thirty to sixty minutes. The feet and abdomen should be kept warm. Cleanliness and fresh air aid recovery. Except in severe cases, children should be taken out-of-doors for short intervals, properly protected from atmospheric changes.

Chronic Infantile Diarrhœa.

Chronic infantile Diarrhœa is generally much milder than the acute, but none the less grave on that account. Indeed, the commencement is often so insidious that this serious derangement is overlooked till the loss of flesh and strength are so far advanced as to force a conviction that some secret disease has been undermining the system. In this insidious form, fever is absent from the first; the evacuations may be three or four daily, about the color and consistence of putty, and accompanied with pain and straining. The dejections consist partly of undigested food, and, when there is violent straining, mucus, and even blood from small vessels ruptured by the severity of the straining. The motions often smell sour and offensive, while the child looks dull and pale, but otherwise well. This form of Diarrhœa may continue for weeks, or even months; the additional symptoms being loss of flesh, color, and activity. At length more decided symptoms set in; the stools become watery, slimy, clay-colored, or grass-green, having an increasingly offensive odor. At this stage variations are almost constant, often coincident with atmospheric changes. The emaciation advances; the food, eagerly taken, seems to pass through the child immediately in an undigested state; the child lies listless and helpless, or cries plaintively, and

draws up his legs from the accumulation of gas in the abdomen. The skin is now dry and harsh, the features old and pinched, the bones projecting, and the child appears a mere skeleton, loosely covered with flaccid skin. The appetite becomes capricious, or is altogether absent; the stools become excessively frequent—fifteen or twenty in the twenty-four hours; Thrush, sorness of the buttocks, and death may shortly supervene.

From the poverty and thinness of the blood, the feet, fingers, and eyelids may swell; or effusions may take place in the lungs. Eruptive fevers are very liable to occur, or Convulsions or stupor may precede dissolution. Should the stools, however, become more solid, and colored with bile; should the patient also assume a more active, fretful, and tearful temperament, hopes of recovery may be entertained. Diminished fœtor of the stools, Constipation following the relaxation, and increase of flesh and strength, are additional grounds for anticipating a favorable termination of the disease.

Causes.—Chronic Diarrhœa is generally traceable to three sets of causes—viz., bad hygienic conditions, atmospheric influences, and improperly treated acute disease.

The younger the child, the more easily is it impressed by neglect of cleanliness, want of proper food, fresh air, and sunlight; and the more essential to recovery is its removal from the influences of these causes. The reprehensible practice of giving newly-born infants castor-oil and boluses of sugar-and-butter by ignorant and old-fashioned nurses is also a frequent cause of Diarrhœa, Vomiting, and Indigestion. Chilling of the surface of the body is another frequent cause of Chronic Diarrhœa. As this cause may be obviated, we would impress upon all mothers the necessity of protecting their children, especially if at all delicate, from the inclemencies of the weather.

The acute disorders to which this form of Diarrhœa is a common sequel are—Measles, Smallpox, Scarlatina, Inflammation of the Lungs, Enteric Fever, Croup, Bronchitis, and Pleurisy. Inflammation of the large bowel, when the motions assume a dysenteric form, Ulceration of the mucous membrane of the small intestines, and Tubercular Peritonitis, are also causes.

Diagnosis.—If the disease date from a few days of the child's

birth, or if its commencement coincide with weaning or the use of unsuitable food, it is probably a simple Intestinal Catarrh. In this species of Chronic Diarrhœa the temperature is lower than in health. When derangement follows an acute disease, there is generally fever, pain in the abdomen, languor, and frequently vomiting. These symptoms slowly subside, and leave the case one of Chronic Diarrhœa, such as we have already described.

Tubercular inflammation of the mesentery—Marasmus is one of the most formidable causes of Chronic Diarrhœa; and may always be suspected when, without the irritation of dentition, there is a persistent elevation of temperature in the evening. When the Diarrhœa shows traces of blood, and the abdomen is very tender to pressure, Ulceration of the mucous membrane of the intestine is probably present.

Prognosis.—The graver forms are those following inflammatory diseases, or when the stools are greenish matter, like chopped spinach, or brown, fœtid, dirty fluid and mixed with purulent mucus and blood. Dry and rough tongue, Thrush, or Dropsy are very unfavorable symptoms. Great tenderness of the abdomen on pressure is also of serious import. On the other hand, if the motions become thicker and more uniform (homogeneous), even though they continue very offensive, a favorable result may be anticipated. Amongst the additional favorable signs may be included—continuance of the natural progress of Dentition, the appearance of tears, and the occurrence of any eruption (unconnected, of course, with any of the exanthemata) upon the child's body, even although the Diarrhœa may not at the time have undergone any visible improvement (*Dr. Eustace Smith*).

Our allopathic brethren view with dismay the exceeding fatality of this disorder; under homœopathic treatment, complete recovery is the rule.

Indications for Treatment.—*Arsenicum.*—Bluish or white tongue; excessive, unquenchable thirst; vomiting; distention of and pain in the abdomen; Diarrhœa worse after food, especially after midnight; motions watery, slimy, black, green, whitish, or bloody, and frequent and scanty; weakness and emaciation; distressing restlessness, sleeplessness; pale face; coldness of the extremities.

Calcarea Carbonica. —Diarrhœa in weakly, pale-faced, emaciated, scrofulous children, who are liable to glandular swellings on taking the least cold; undigested, sour, papescent, frothy, fœtid, or involuntary stools; thread-worms; pains during a motion, and faintness afterwards.

Carbo Vegetabilis.—Offensive Diarrhœa; thirst after a motion; much flatulence, acidity, and ill-humor.

Cina.—Diarrhœa associated with worms; starting and crying in sleep, and other worm symptoms.

China.—Diarrhœa, worse after eating; yellow, watery, undigested, blackish or putrid motions; flatulence; loss of appetite; debility.

Croton Tiglium.—Thin, yellowish-brown, putrid evacuations, expelled suddenly, and induced by eating; involuntary stool during sleep.

Iodium.—Thin, fœtid evacuations, with distention of the bowels; emaciation from unassimilated food; hectic symptoms. It is especially suited to the Diarrhœa of strumous children.

Mercurius Iodatus.—Chronic Diarrhœa, with hardness and enlargement of the abdomen; the glands may sometimes be felt on pressing the hand upon the bowels, which impart a knotty feeling. This remedy is most suitable for the stunted and ill-nourished children of weakly parents, particularly when scrofulous enlargements or Abscesses exist.

Mercurius Sol.—Frequent evacuations of frothy mucus, or whitish, green, offensive, or bloody stools; excoriation of the anus; violent pain; Jaundice. If there is severe straining, with other dysenteric symptoms, Merc.-Cor. is preferable.

Phosphorus.—Chronic Diarrhœa in children having a consumptive tendency; yellow tinge of the eyes and skin; great prostration; chest complications.

Accessories.—In the case of infants, milk-and-water, without sugar, is the best of all food; but where it does not agree some of the "prepared food" may be tried. In some few cases animal broths are efficacious. In older children, old rice, freshly cooked in milk, is excellent. Mutton, chicken, game, pigeon, white fish, etc., are generally advantageous if not overdone. Raw eggs beaten up, or eggs lightly boiled, and other nutritious kinds of

food, are necessary. A piece of tender, juicy, under-cooked lean mutton, minced and pounded to a pulp, with all pieces of fibre removed, and mixed with bread-crumbs and a little salt, may be tried. Of this from one to three ounces, according to the age of the child, may be given daily. This dish is particularly valuable when the Diarrhœa has caused much wasting and exhaustion, and when the evacuations contain unaltered food. Tepid abdominal compresses, and frictions over the spine and whole body, are also necessary. An abdominal belt of flannel is often efficacious. As suggested under "Causes," children should be protected against atmospheric changes by warm clothing. Lastly, change of air is often necessary and promptly curative. If no other end be served, it may remove the little patient out of the range of some undetected and unthought-of cause of the disease, which exists in the air or water.

Inflammation of Bowels.

Definition. — Inflammation of the intestines, the disease involving all their coats or only their mucous lining.

Symptoms.—Rigors, followed by dry, hot skin, quick, wiry, strong pulse, thirst, nausea, or vomiting, and often constipation. The patient complains of severe pain in the abdomen, especially around the navel, which is aggravated by pressure. He lies on his back, with his knees raised. Diarrhœa is also a frequent symptom.

Causes.—Cold, errors in diet, purgatives, worms, internal strangulation of the bowels, some general disturbance, as fever.

Treatment.—It will rarely be improper to commence the treatment with a few doses of Acon. If the disease has arisen from cold, and be encountered early, this medicine will most likely rapidly restore the patient's health.

Indications for the Remedies.—*Aconitum.*—In the early stage when there is a good deal of fever, and the skin is hot and parched.

Arsenicum.—Severe burning pains around the navel, obstinate vomiting, and much prostration.

Colocynth.—Drum-like distention of the abdomen, severe grip-

ings, bilious vomiting; when the large intestines and rectum are affected.

Kali Bichrom.—Thickly-coated, brown tongue, bitter taste, pale stools; when the upper part of the intestines is affected.

Mercur.-Cor.—Hard, distended, and tender abdomen; fœtid, watery stools; constant urging to stool, followed by straining and evacuations of mucus or mucus and blood.

Podophyllum.—Diarrhœa, with stools constantly changing in appearance; morning exacerbation; tendency to jaundice.

Accessories.—Hot fomentations to abdomen, followed by a carefully-applied tepid wet compress. Ice or cold water may be taken freely in small quantities. The diet should consist of milk-and-water only. As the disease subsides beef-tea or prepared farinaceous food may be given.

Prolapsus Ani—Falling of the Bowel.

Definition.—A protrusion of the mucus lining of the rectum through the anal orifice, after the action of the bowel, which goes back of itself, or is easily replaced.

Causes.—Long-continued Constipation or Diarrhœa; purgatives; straining excited by the irritation of worms, or of stone in the bladder; laxity and delicacy of constitution. Although not confined to them, it is most frequent in children.

Indications for Treatment.—*Arsenicum.*—When there are hot, loose motions preceded by colicky pains and thirst.

Calc.-Carb.—In chronic cases in scrofulous children.

Lycopodium.—Inflamed rectum, much flatulence in lower bowel.

Merc.-Cor.—Much tenesmus, with blood in stools.

Podophyllum.—Prolapsus of the rectum; loose motions, of a brownish hue, hot, and having an acrid odor.

Accessories.—When Prolapsus occurs after the action of the bowel, the protrusion should be reduced by placing the child across the lap, and making pressure on the protruded part with the fingers, previously lubricated, and carried beyond the contracting ring of the muscle around the anus. Prolapsus occasioned by straining from thread-worms is usually corrected by the treatment prescribed in the Section on Worms. Bathing the parts

with tepid water every morning, and injections of warm water, are useful.

The child should lie down for a short time after the action of the bowels. Constipation should be prevented by the measures elsewhere prescribed. The diet should be wholesome and unstimulating.

Ruptured Navel.

Definition.—A protrusion from the abdominal cavity through the navel-ring, where it forms a smooth, ovoid, tense tumor, easily returnable by pressure. It is sometimes congenital, but more frequently occurs soon after the separation of the navel cord.

Causes.—Violent crying or straining of the infant, while the integuments which close the umbilical ring are but imperfectly developed.

Treatment.—Should there be any signs of a protrusion at birth, or soon after, a circular piece of cork should be applied, somewhat convex on both sides, covered with soft leather, and secured by a moderately tight-fitting bandage around the abdomen. A flat piece of sheet lead, or ivory, protected with soft leather, with the convex surface over the aperture, may be substituted for the cork. If the pad slips off the part, it should be secured by cross pieces of adhesive plaster. If the pad is nicely applied, and continued for one or two months, a radical cure may be expected.

Remedies. — Nux Vomica at night, and Sulphur in the morning, are recommended, and probably facilitate the cure.

Incontinence of Urine—Wetting the Bed.

This is a frequent and troublesome affection of children; not a disease in itself, but a symptom dependent upon causes often difficult to detect: it may consist of partial or complete loss of power to retain the urine. The most common form is *Enuresis nocturna*—wetting the bed; in rarer cases the child may have an almost incessant urging to pass water, which, if not responded to, results in a painless, involuntary discharge. If the child be troubled with a cough, the inconvenience is much increased, as during each paroxysm the urine is apt to escape. The affection

is most common in children from three or four to fourteen or sixteen years of age, and is most frequent at night.

Causes.—Irritation of the bladder from worms; strumous, or syphilitic constitution; too large a quantity of warm fluids in the evening; food or drink causing an acid state of the urine, which irritates the mucous coats of the bladder; Calculi; Tumors; congenital Phymosis; etc.

Indications for Treatment. — *Belladonna.* — Especially useful when the affection is most troublesome at night.

Benzoic Acid.—High-colored and strong-smelling urine

Calc.-Carb.—In scrofulous patients; worms.

Cantharis.—Reddish urine, passed with heat and pain; feverishness.

Chamomilla.—Uneasiness in urinating, Indigestion, and sourness of the breath.

Cina.—From thread-worms.

Ferrum.—Inability to hold the urine during the day.

Gelsemium.—Inability to retain the urine night or day.

Phos.-Acid.—Excessive, pale, watery, alkaline urine.

Accessory Means.—As incontinence of urine is generally the result of disease, medical and general treatment, which must be entirely regulated by the cause, are necessary to correct the annoyance. All salt, sharp, and sour articles of food, malt-liquors, spirits, tea and coffee, should be avoided. Meat may be eaten in moderate quantities, but only a small quantity of fruit, and no flatulent food. Nothing hot should be taken in the after-part of the day. Simple water, milk-and-water, and cocoa are the most suitable beverages. Cold water or mucilaginous drinks in moderation tend to diminish the acrid properties of the urine. The mother or nurse should be quite certain that the child fully empties his bladder before getting into bed, as a child very tired or sleepy is apt to shirk this. Until the cause is removed, the child should be taken up once or twice in the night to urinate. He should sleep on a hard mattress, with light clothing, and not be permitted to lie on his back; this may be prevented by fixing an empty cotton reel so that on turning on his back the reel may press into the muscles. At bedtime an occasional warm bath at 90 deg. to 98 deg. Fahr., or a warm sitz bath, is often of great

value in this disease, and greatly contributes to the success of the general treatment. Sponging the lower part of the back with hot water at bedtime is said to cure some cases of incontinence in children. Patients should take much open-air exercise, and have ablutions with tepid water every morning: the whole process, including drying with a large towel or sheet, should not occupy more than a few minutes.

Children troubled with nocturnal incontinence should be prevented from falling into a morbidly profound sleep, as it is then that the discharge of urine occurs. Heavy sleep may be obviated by waking up the patient about the second hour of sleep.

Corporal punishment will work no cure. The fear of it increases the tendency to urinate in the case of nervous children.

Retention of Urine.

Definition.—Inability to discharge the urine collected in the bladder.

Symptoms.—The child is restless, uneasy, and unable to pass water beyond, perhaps, a small quantity, though there is frequent urging; or there is a continual oozing of urine, which smells strongly ammoniacal. The urine may be bloody, or contain mucus or pus. In chronic cases it may result in dilatation of the kidneys, uræmia, and death.

Diagnosis.—In retention of urine the distended bladder may be felt at the bottom of the abdomen, and its enlarged dimensions discovered by palpation. If a catheter be introduced, the bladder is found full. In suppression of urine the bladder is found empty. Death is preceded by drowsiness, coma, and convulsions.

Causes.—Cold; acute fever; fibrinous exudation; injury to the spine; inflammation of the bladder or urethra; holding the urine too long; paralysis of the sphincter vesicæ; Stone in the Bladder; Spasms; Hysteria.

Indications for Treatment.—*Aconitum.*—Retention from cold, fever, or inflammation. Hot, dry skin, thirst, etc.

Cannabis Sativa.—Slight discharge on urging, of thick mattery urine.

Cantharis.—Frequent urging, with total suppression; or the discharge, with pain, of a few drops of bloody urine.

Gelsemium.—Spasmodic retention; the water being passed freely at times.

Nux Vomica.—Constipation, heat in the lower part of the abdomen; in patients of a bilious temperament.

Pulsatilla.—Bowels tending to be relaxed, heat in the lower part of abdomen; in patients of a mild temperament and sensitive disposition.

Accessories.—The child should have a warm or hot bath, followed by ample friction, especially along the spine; and only a sparing diet. Gum-water, barley-water, or cold water may be freely taken. The catheter is seldom requisite, unless there be spinal or other organic disease.

Worms.

The worms that most commonly infest children are of three varieties—the thread-worm,—pin-worm or maw-worm; the round-worm; and the tape-worm. The first two are most common, the tape-worm being very rare in children under three years of age.

Thread-worms are from half to three-quarters of an inch in length, white and thread-like, moving rapidly. They inhabit the rectum chiefly, and cause great irritation.

The round-worm is from six to fifteen inches long, similar to the common earth-worm, but of a paler color. It feeds on the chyle, and lives generally in the small intestines; but it sometimes passes upwards into the stomach and expelled by vomiting, or downwards, and ejected with the evacuations.

The tape-worm is white, flat, and jointed, varying in length from a few feet to several yards. It generally exists alone.

Symptoms.—Thread-worms give rise to itching and irritation about the anus, especially troublesome in the evening; depraved or irregular appetite, offensive breath, picking at the nose, puffiness of the face, straining at stool, falling of the bowel, Pruritus vulva, disturbed sleep, and general restlessness.

When round-worms exist in large numbers, there may be, in addition to the above symptoms, pain and swelling of the abdomen; slimy stools; tenesmus; chronic Diarrhœa, most troublesome at night, with thin, scanty, and offensive motions; pallid

countenance, dilated pupils, grinding of the teeth in sleep, Convulsions, Chorea, etc.

The symptoms of tape-worm are less marked; sensations of weight or gnawing in the abdomen; enlargement about the navel; great appetite, and progressive emaciation.

Worms are frequently not suspected until seen in the evacuations.

Causes.—The predisposing cause of worms is an unhealthy, slimy condition of the intestines of infants and young children, from improper feeding. When the conditions are favorable for the development of worms, their germs or eggs, conveyed into the system by drinking impure water, by eating imperfectly-washed vegetables, or underdone meat, find a nest in which to grow and multiply.

Treatment.—Where thread or round worms exist, Cina will usually be found an effective medicine. The tape-worm will require the oil of the male Fern, sometimes in large doses, for its expulsion.

Indications for Remedies.—*Ant.-Crud.*—White tongue, white, mucous Diarrhœa.

Cina.—Boring at the nose; livid semicircles under the eyes; tossing about or suddenly crying out in sleep; nausea and vomiting; griping; itching in the anus; white, thick urine; Epilepsy, Convulsions, or other nervous disorders.

Male Fern Oil.—One of the most useful and reliable remedies in tape-worm.

Mercurius Sol. 6.—Whitish, greenish, pappy, or bloody evacuations, with tenesmus; distention of the abdomen, fœtid breath; great flow of saliva; restlessness at night.

Sulphur.—Worm-colic; Constipation; and to complete the cure.

Urtica Urens.—Excessive itching of the anus, especially at night, from thread-worms.

Additional Remedies.—Ars., Calc.-C., Ignat., Puls., Santon., Teucrium.

Accessories.—When there is much irritation, an injection of salt-and-water (a teaspoonful to half-a-pint) may be used at bed time, for several days. Or lime-water injections may be used, or a little sweet oil. The application of lard to the anus, every

night for eight or ten days, tends to free the child from thread-worms. The diet should include well-cooked animal food—beef, mutton, fowl, white-fish, and a liberal quantity of salt as a condiment. Cakes, pastry, potatoes, butter, veal, and pork should be withheld. The hygienic means for improving the constitution of the child, recommended under the various diseases of the digestive organs, should also be adopted.

CHAPTER IV.

DISEASES OF THE RESPIRATORY SYSTEM.

Croup.

Definition.—Inflammation of the mucous lining of the larynx and trachea, with swelling from effusion into their sub-mucous areolar tissue, and secretion of tenacious mucus.

The essential nature of Croup is a catarrhal inflammation affecting the above organs, without the formation of any false membrane; when a membranous exudation does take place the disease is Diphtheria.

Causes. — 1. *Predisposing.* — The comparative smallness of the larynx and trachea in infancy and early childhood. After the third year the caliber of the trachea enlarges rapidly, and the liability to Croup correspondingly diminishes. There is also a clear predisposition to it in some patients and families. 2. *Exciting.*—Exposure to cold, sudden changes of temperature, wet feet, poor or scanty food, especially the adoption of improper diet on weaning, keeping a child in a room the floor of which has been newly washed; dark, damp, low-lying localities. The disease is most frequent in winter and spring.

Symptoms. — The early symptoms resemble those which initiate an attack of Measles—fever, Hoarseness, and a dry barking cough of that distinctive character which necessarily occurs when the *rima glottidis* is contracted. Indeed, this cough is the characteristic symptom, and probably exists two or three days

before it is sufficiently marked to excite maternal alarm. But to educated ears the cough is characteristic almost from the commencement; and if the child be requested to take a deep breath the harsh sound completes the diagnosis.

The accession of the alarming symptoms generally occurs suddenly, and often in the night, the mother dating the attack from the commencement of the danger. The symptoms are very severe, but aggravated in frequent paroxysms; there is great difficulty of breathing from the congestion and swelling of the lining membrane of the larynx, and the diminution of the chink at its outlet, so that the child throws its head back to put the parts on the stretch; every breath becomes increasingly difficult, and the turgescence of the face and neck shows that an insufficient supply of air enters the lungs, notwithstanding the severity of the respiratory efforts; the cough is loud and brazen, the voice is hoarse, or absent, the pulse quick, and the skin hot and dry.

In fatal cases, the lips and face become increasingly purple, the pulse small and thready, the lungs congested, and the patient dies from suffocation. In some cases death is preceded by Convulsions.

DIFFERENCES BETWEEN CROUP AND DIPHTHERIA.

CROUP.	DIPHTHERIA.
1. There is a premonitory hoarse, metallic cough, without premonitory illness.	1. There is a premonitory illness —shivering and fever, with sore throat—without premonitory cough.
2. Croup is only dangerous in consequence of its locality.	2. Diphtheria is dangerous *per se*, and the production of a false membrane is but one of its phases.
3. This disease is sometimes preceded by catarrhal symptoms, which extend upwards from the chest to the larynx.	3. The throat-affection tends to pass downwards to the respiratory tract.
4. Croup being a local disease, the treatment consists mainly in subduing the local symptoms.	4. Diphtheria being a blood-poison, and causing great general depression, the treatment must be directed to combating the systemic mischief.

Danger.—This arises from the narrowing of the aperture for breathing consequent on the congestion and effusion present.

The same amount of effusion into the sub-mucous areolar tissue elsewhere would be of no grave consequence. This danger is diminished just in proportion as the cough becomes looser, and the secretion of the air-passages becomes thinner and more easily removed.

Treatment.—As in all other inflammatory diseases, *Aconite* is here the leading remedy. It should be given every fifteen or twenty minutes for three or four times, and then every half-hour or hour, until some marked impression is made upon the fever symptoms. *Spongia* may then be substituted for it, or the two medicines may be given alternately at intervals of an hour or two, as long as may be necessary.

Indications for the Remedies.—*Aconitum.*—Always in the early stage, and when there are any febrile symptoms, with short, dry cough, and hurried and laborious breathing.

Ant.-Tart.—When there is much oppression on the chest, copious *phlegm*, impeded respiration, and inclination to vomit.

Hepar S.—After the subsidence of the fever, when there is loose, metallic cough, with rattling in the chest, and difficult expectoration.

Iodium.—For scrofulous children especially. Hoarse, hollow, ringing, whistling cough, with pain in chest, and labored breathing.

Spongia.—For symptoms resembling those of Iod.

Sulphur.—During convalescence.

Accessory Measures.—During the treatment, everything likely to excite or irritate the patient should be avoided. He may have a partial or complete warm bath; his throat should be fomented by means of sponges or cloths squeezed out of hot water, and a compress or flannel applied to the part when not fomenting; the feet and general surface of the body kept warm, and the air of the apartment raised to about 65 deg. Fahr., and this temperature uniformly maintained by day and night. The air should also be moist as well as warm. Steam may be inhaled, either alone or mixed with the remedy that is being administered. A few drops of the strong tincture of the remedy required may be dropped into a small tin kettle, kept boiling over the flame of a spirit-lamp, and fixing a tin or paper tube to the spout, convey the vapor close for the patient to inhale. In very bad cases a

sort of tent should be formed over the patient's bed, and the steam conducted under it by a tube.

Diet and Regimen.—During the attack, water is almost the only article admissible, and may be given in small, frequent quantities; when recovery sets in, milk-and-water, arrowroot, gruel, etc. In the case of delicate children, or when great weakness suddenly occurs during the course of the disease, it may be necessary to support the patient by essence-of-beef, wine-and-water, etc., which should be administered in small quantities, at regular and frequent intervals. In the case of an infant at the breast, the mother should adopt the dietetic suggestions elsewhere given.

Whooping-cough.

Definition.—A paroxysmal cough, chiefly affecting infancy and childhood; consisting of violent, spasmodic, rapidly interrupted fits of coughing, alternating with prolonged, shrill, crowing inspirations, and ending in vomiting, or in the expectoration of thick, glairy mucus.

Whooping-cough is both epidemic and contagious, usually mild in healthy children, but severe and sometimes fatal in the scrofulous. Infants under three years of age are especially liable to it; it is rare after ten. The younger the infant the more dangerous the disease. It frequently occurs as an epidemic about the same time as Measles; and though this may be at any time of the year, these disorders are specially prevalent in spring and autumn. The duration of the disorder varies from six weeks to months. This depends very much on the temperament and constitution of the child. But the duration of the disease may be much abridged by homœopathic treatment.

Cause and Mode of Spreading.—A specific unknown poison which influences the mucous membrane of the bronchial tubes, producing enlargement of the absorbent glands at the root of the lungs, and consequent irritation of the branches of the *pneumo-gastric* nerve distributed to those parts. The poison is transmitted by the atmosphere and by infected clothing. It often follows Measles and Small-pox.

Symptoms.—Whooping-cough usually commences as a Catarrh

with cough, which returns in fits at intervals. In about a week the cough recurs at short intervals, in paroxysms of extreme severity, the child turning red or almost black in the face, and appears as if choking, during which the lungs are emptied of air to the last degree; and then a long, sonorous inspiration, taken to refill them, constitutes the "whoop."

This "whoop" is the signal of the child's safety, for where suffocation does take place it is before the crowing inspiration has been made. The attacks recur every two or three hours, or, in severe cases, oftener, and sometimes blood escapes from the nose, mouth, and even from the ears. The successive fits pass off with the expectoration of glairy, ropy mucus, and sometimes with vomiting. Between the attacks there is such freedom from pain and ease of breathing that the child is lively and cheerful.

Weakness and loss of flesh are, however, occasioned by the repeated ejection of food from the stomach, and by the terror with which the child dreads the attacks. The cough is generally worse at night, so that a decline of nocturnal attacks is a favorable symptom. But it may be brought back with all its severity by exposure to cold, by improper food, and by want of careful nursing during the period of convalescence. In any case it is rarely fatal, though danger is greater during the colder seasons of the year, and in young infants and strumous children.

Complicated Whooping-Cough.—Whooping-cough may supervene upon other diseases and complicate them, or, being primary, other diseases may arise in its course. Congestion of the Lungs, Bronchitis, Emphysema, Pneumonia, Pericarditis, Hydrocephalus, Convulsions, and Infantile Remittent Fever are the most common complications. Convulsions are especially liable to occur when dentition is in progress during the disease.

If there exist any tendency to lung or mesenteric disease, Whooping-cough may hasten its invasion. It will be evident, therefore, that professional skill and examination are often necessary during the course of the disease.

Treatment.—In the early stage the symptoms are usually those of a common cold, and point to Acon. and then to Ipecac., which medicine may be given alternately, or otherwise, as the case may demand. When the spasmodic and peculiarly charac-

teristic "whoop" is decided, Drosera should be administered—a dose every three hours.

Indications for the Remedies.—*Aconitum.*—Febrile symptoms, dry cough, burning pain in larynx.

Belladonna.—Dry cough, spasmodic contraction of larynx, sore throat, flushed face, suffused eyes, convulsions.

Cuprum.—Paroxysms attended with threatened suffocation, vomiting, rattling noise in bronchial tubes, convulsions.

Drosera.—Similar to Cuprum, but without convulsions.

Ipecacuanha.—Dry cough; vomiting, especially in the early stage of the disease.

Additional Remedies.—Ant.-Tart. (Bronchitis, with much sputa; Bry. (Pleuritis); Carbol.-Ac. (premonitory Catarrh); Coral.-Rub. (fully developed symptoms, return of cough after it has apparently left the patient); Cina (cough with gastric derangement, worms); Dulcam. (aggravated by damp); Kali Bich. (Bronchitis, with stringy mucus); Phosph. (Pneumonia). Ammon.-Brom.—Drs. Harley and Gibbs regard this remedy as almost specific, and many cures by it are reported.

Accessories.—In warm, fine weather the patient may take exercise in the open air during portions of each day; indeed, a reasonable degree of exposure to open air, in the absence of unfavorable conditions, is one of the most essential aids towards recovery. But damp and draughts should be strictly avoided, as the skin is generally relaxed, sensitive to cold, and after a paroxysm bathed in perspiration. Warm clothing is therefore necessary. Fits of anger add to the frequency and violence of the paroxysms. Infants must be watched day and night, taken up as soon as a fit comes on, and placed in a favorable posture.

In obstinate cases, change of air, if only for a short distance, often proves of great utility.

The inhalation for a few minutes of the vapor which rises from lime used to purify gas has been found very beneficial in some cases.

Another means of relief is to rub the chest and back of the little sufferer with oil for a few minutes every morning and night. Spinal friction is also of service.

Diet.—Light, digestible food only, in moderate quantities,

frequently given; in the convulsive stage it should be highly nutritious. Toast and water, barley-water, or gum-water are grateful and soothing; but a too exclusive slop diet often aggravates the vomiting.

[Naphthaline 3x taken from four to six times a day, is an excellent remedy.]

Mumps.

Definition.—An epidemic and contagious affection of the parotid and salivary glands, more prone to attack children than adults, and seldom recurring in the same person.

Symptoms.—Swelling, heat, stiffness and soreness in one or both parotid regions, at the angle of the lower jaw, preceded by febrile symptoms. Sometimes one side, sometimes both sides, are affected; there is often considerable deformity, with difficulty and pain in moving the jaws. On or about the fourth day, in favorable cases, the inflammation and swelling reach their height, and by about the eighth or tenth day all traces of the complaint disappear. In Mumps the glands rarely suppurate.

Metastasis.—In some cases, as the swelling of the neck and throat subsides, the testicles in the male, and the mammæ in the female, become tender and swollen. Occasionally the metastasis is to the brain, and then the case becomes very serious. The transference of the disease from the part first implicated to the testicle or mamma is most likely to supervene from exposure to cold, or from cold applications.

Causes.—A specific morbid miasm, generated during peculiar conditions of the atmosphere, which spreads contagion. Cold and damp favor its appearance. It is also liable to occur during the course of severe fevers, in Cholera, and from large doses of Iodine or Mercury.

Epitome of Treatment.—1. *Swollen glands; difficult mastication.*—Merc.-Cor., or, in strumous patients, Merc.-Iod.; a dose every six hours is usually sufficient. Phyto. is also valuable.

2. *Feverish disturbance.*—Acon.; two or three doses sufficient.

3. *Metastasis*—Bell. (brain), Puls. (testicles and mammæ.)

Accessory Measures.—Exposure to cold or damp during the progress of the disease should be avoided; also cold local appli-

cations, for they favor the tendency to metastasis. Warm fomentations are beneficial, the parts being covered in the intervals with a silk handkerchief or with one or two thicknesses of flannel. In mild cases flannel is the only application necessary. Complete rest, both physical and mental, and liquid food, favor recovery.

CHAPTER V.

BLOOD DISEASES.

Scarlet Fever—Scarlatina.

Scarlet Fever is chiefly prevalent in children, especially from the second to the fifth year of life. It is by no means infrequent during the second year, and even occurs before the end of the first, although infants a few months old seem to enjoy a special immunity. We have often attended families in which all the children have been suffering from the disease except the baby, who, crowing and smiling all the time, was the only one unaffected. But the opinion that the disease does not attack children under two years or even one year old is erroneous. Of the entire mortality from Scarlet Fever, about sixty-eight per cent. is among children under five years of age, and about twenty-four per cent. more among children from five to ten years. After the tenth year the susceptibility rapidly diminishes. The common notion that Scarlatina is a mild, and Scarlet fever a severe, form of the disease is incorrect, for the terms are synonymous.

Varieties. There are three varieties, or, more correctly, degrees of intensity; for though it is convenient to speak of *Scarlatina simplex*, *S. anginosa*, and *S. maligna*, they are but one disease, manifesting different degrees of severity. Exposure to the infection of *S. simplex* may give rise to an attack of *S. maligna*, and the reverse. The same organs are affected, the same functions are disturbed, and the same secondary diseases follow in each case. The characteristics of each variety are as follows:—1. *S. simplex*. A scarlet rash, with moderate fever and

slightly enlarged and inflamed tonsils. 2. *S. anginosa.* Those of *S. simplex* in an aggravated form, with a more severe affection of the throat, and swelling of the submaxillary glands. 3. *S. maligna.* The rash is of a dark-red color, and comes out later than in the other varieties, and often imperfectly or irregularly; the throat is dark-red, livid, ulcerated, or covered with dark sloughs, and the febrile symptoms assume a typhoid form. In this variety there is consequently great danger to life.

Scarlatina is more likely to assume a malignant form than any other eruptive fever, and it sometimes prevails as an epidemic in low, ill-drained, and densely-populated districts. It should always be under the care of a homœopathic physician, as the mildest forms, neglected, have often led to the worst results.

Mode of Propagation.—Although we are ignorant of the origin of Scarlet fever, we know that it spreads by infection, and that most rapidly and persistently. It is by no means necessary to have direct contact with a patient, or to imbibe or touch anything that has been directly contaminated by him—it is not even necessary to be in the same room, in order to take the disease. The poison rapidly diffuses itself throughout the whole house unless stringent preventive or disinfecting measures are adopted, and no inmate can be said to be safe unless he has previously had the disease, and even then he is not absolutely so. The unseen germs, which no microscope can detect, are not only very rapid and fatal in their action, they are also very tenacious. They lurk in all kinds of places, and cling to everything. The clothes of attendants as well as of the patient, the bedding, furniture, and walls of the rooms, persistently retain the poison. And they have been known to communicate the disease after an interval of one or two years.

Against this insidious infection neither physicians or ministers enjoy exemption. The records of epidemics and campaigns too amply prove that, leading no charmed lives, they carry with them no antidote against the poisoned arrows of Scarlet Fever, Typhus, or Cholera.

General Symptoms.—Scarlatina has a latent period of about five days. It commences with the ordinary symptoms of fever—chills, shivering, hot skin, frontal headache, rapid pulse, nausea,

sometimes vomiting, thirst, and sore throat. The last-named symptom is generally the first complained of by the patient.

After a short time the pulse becomes very quick, often in children 120 to 140 in the minute. In about forty-eight hours after the occurrence of these symptoms, the rash comes out, first on the breast, then on the neck, face, body, and over the great joints and limbs, till the whole body is covered with it.

The eruption usually fades away in the same order. Its appearance is a bright-scarlet efflorescence, consisting of innumerable smooth spots, not raised above the skin, having the color and semblance of a boiled lobster-shell. The color disappears on pressure, but immediately returns on its removal.

The tongue at first is coated with a creamy fur, the tip and edges are red, the papillæ are red and raised, giving it a peculiar strawberry-like appearance. This is always exhibited in the course of the disorder, and not unfrequently at its commencement. The tongue afterwards becomes preternaturally clean and raw-looking. A diffused redness, sometimes of a dark claret-color, covers the mouth, fauces, etc., which disappears as the febrile symptoms and rash subside. On about the fifth day the efflorescence generally begins to decline, and by about the eighth or ninth entirely disappears, leaving the patient prostrate.

During a period of uncertain length, the outer skin comes off as scurf, or moulded masses are thrown off, especially from the hands and feet. The disease does not, however, always pursue this uniform course. In the exceedingly dangerous form we have described, the eruption is either entirely wanting, or livid and partial. Sometimes the mucous membranes are threatened with gangrene, the glands and even the cellular tissues of the neck are very much swollen, the fever assumes a malignant character, and is attended with prostration so extreme that a patient may sink in a few hours under its virulence.

Treatment.—At the commencement of the illness, or before its true nature is recognized, the febrile symptoms may be modified by a dose of Acon. every two or three hours. When the characteristic redness of the skin or throat shows itself, Bell. should be administered in a similar manner; or if the fever continue high, the two medicines may be given alternately, at inter-

vals of two hours. If the case be one of *S. simplex* no other medicines will probably be needed, until it is on the decline, when Sulph. should be taken night and morning for two or three days. In *S. anginosa*, Acon. will hardly be needed; Apis or Mercurius will have to take the place of Bell., and, if the heat of skin or restlessness be considerable, in alternation with Gelsemium. In *S. maligna*, Ailan. or Ammon.-Carb. will be more especially called for.

Indications for the Remedies. — *Aconitum.* — Hot skin, thirst, headache, restlessness, and other febrile symptoms.

Ailanthus Gland.—Malignant Scarlatina, with purple or nearly suppressed rash, fœtid discharge from the nostrils, cracking at the angles of the mouth, etc. It should be given directly unfavorable symptoms are observed, and frequently repeated until improvement ensues. This is indicated by increase of the eruption, by its assuming a scarlet color, and by diminished circulatory and nervous disturbances.

Ammon.-Carb.—Very decided physical and mental prostration.

Apis.—Urgent throat symptoms, and when there is more œdema than ulceration.

Arsenicum.—Severe prostration, excessive thirst, cold clammy sweats, frequent, weak pulse, threatened diarrhœa.

Belladonna.—Is specific in, and exerts a direct power over, Scarlet Fever in its simple form. When the eruption is of a scarlet color the disease will frequently yield to the action of this remedy without the aid of any other.

Gelsemium.—Imperfect eruption, nervous restlessness, remittent symptoms.

Mercurius Sol. 6.—Inflamed, swollen, or ulcerated throat; difficult swallowing; copious saliva, ulcers in the mouth; acrid discharge from the nostrils.

Muriatic Acid.—Malignant sore throat, with extreme depression, tremors, etc.

Sulphur.—When a disease is on the decline, to prevent secondary complaints; a dose morning and night for several days.

Veratrum Viride.—Severe cerebral disturbance, vomiting, and very rapid pulse.

Additional Remedies. — Ant.-Tart. (in the first stage, if attended with convulsions, cold sweat, difficult breathing, or

vomiting); Bar.-Mur. (swelling of glands); Coffea (restlessness and sleeplessness); Cup.-Ac. (sudden retrocession of the rash); Dig. (little urine, dropsical symptoms); Hyos. (restlessness and sleeplessness); Kali Hyd. (swelling of glands); and tincture of Eupatorium, tincture of Hydrastis or Nit.-Acid 1x (as a gargle, in the proportion of ten drops of the medicine to a gill of water).

When the patient is too young to gargle, the throat should be mopped out with a small piece of moistened sponge secured to the end of a stick, and the gargle afterward applied by means of a clean sponge or a feather. The gargling or mopping may be repeated every two or three hours, not immediately before or after taking a dose of medicine, but about half an hour after a dose has been administered.*

Secondary Diseases (*Sequelæ*). — The following are the chief:—1. Inflammatory swelling of the glands of the neck, which in scrofulous children may attain a large size, suppurate, and the pus burrow under the muscles of the neck. Merc., Hepar S., and Calc. are the chief remedies. 2. The inflammation of the throat may be extended along the Eustachian tubes, producing deafness by their obstruction, or by suppuration of the tympanum, or some other mischief of the ear. The remedies recommended are Bell., Merc., Aurum, or Puls. 3. But the most frequent and dangerous sequel is Anasarca, the treatment of which will be found in the following Section.

Complete suppression of urine without dropsy is far from uncommon. It may last for several days, and terminate either in the gradual resumption of the functions of the kidneys, or in blood-poisoning, sudden Convulsions, and death.

Accessories. — The patient should be placed in a separate room which can be so ventilated as to secure a copious and continual supply of fresh air; for the one means above all others which mitigates the virulence and infectiveness of Scarlet Fever is ventilation. The room should be as free from furniture as possible. Curtains, carpets and woolen stuffs should be removed. A fire is necessary in cold weather. Carbolic acid should be freely used

* I find diluted Acetic Acid—one part of the acid to twelve parts of water—the best wash for the mouth and throat. It tends to remove the deposits which form on the mucous membrane, and is eminently antiseptic.

about the room; and a sheet across the open door, kept moist with the disinfectant, will purify the air for the patient, and lessen the infection through the house. Sponging the surface of the body with tepid water, piece by piece, moderates the great heat and allays restlessness, quiets delirium, lowers the pulse, and favors sleep.* A wet bandage to the throat, when it is affected, is a sovereign remedy, and seldom fails to relieve. It should be fastened both at the back of the neck and at the top of the head, so as to protect the glands near the angles of the jaws. Inhalation of steam from hot water is useful when the throat is sore and painful. The wet-pack, especially at the commencement, is often most valuable, and it may be repeated several times, at a few hours' interval, as long as severe febrile symptoms continue; but it requires to be administered by an experienced person. When the eruption is slow in coming out, or is suddenly suppressed, the child should have a hot bath or be packed in a blanket wrung out of hot water. During convalescence, warm clothing, including flannel, is necessary; and subsequently a change of air, if possible to the seaside. The patient must not, however, go out too early, as secondary symptoms are of frequent occurrence from neglect of this precaution.

Diet.—During the whole course of the fever, milk, either alone or with plain or soda water, thin gruel, sago, arrowroot, yolk of an egg beaten up with cold milk, grapes, oranges, and cooked fruits, should be the staple diet. The drink may consist of cold water, barley-water, weak lemonade, etc., in small quantities as frequently as desired. As soon as the fever subsides, the patient may gradually and cautiously return to more substantial food. Stimulants are rarely necessary, except in malignant cases, when wine, brandy, extract of beef, beef-tea, etc., may be given regularly in frequent small doses, under medical care.

Preventive Measures.—1. *To be adopted by the unaffected:*

* The danger from the exposure necessary either for the full bath or sponging leads us to prefer the method of inunction. The whole surface should be rubbed with Vaseline two or three times a day. This will lower the temperature, relieve the nervous excitement, and prevent the desquamation which is the chief source of infection. The above application should be made under cover, with the temperature of the room at 70°.—Ed.

During the prevalence of Scarlatina, a dose of Belladonna should be given, morning and night, to children who have not had the disease. The first or second dilution of the tincture is the best for this purpose. Should the disease occur notwithstanding this treatment, its severity will be much mitigated. The author has great faith in the virtue of Belladonna thus used, both as the result of his own experiences, and from the testimonies of numerous *confreres* and correspondents. 2. *To be adopted by the attendants upon the invalid:* The attendant should have as little intercourse with the other members of the household as possible. She should wear over her ordinary clothes a dress of calico, which she can readily take off and hang on a peg before she leaves the sick-chamber. She should also dip her hands into a disinfectant before quitting the room. Carbolic Acid or Chloride of Lime—one tablespoonful of either to about a gallon of water—is usually employed for this purpose. All excretions from the invalid should be disinfected with the Chloride of Lime solution, and disposed of at once. All washing apparel that has been used by the patient should, on its removal, be immediately placed in a vessel containing a sufficient quantity of either of the above disinfectants, and be put out of doors as soon as possible, and afterward boiled in the disinfectant. Woollen clothes, bedding, etc., that do not admit of being boiled, should either be burnt or fumigated with Sulphurous Acid for two or three hours. The sick-chamber itself, when the patient is permitted to leave it, should be fumigated in a similar manner. The operation of fumigating with Sulphurous Acid is exceedingly simple. All that is required is to sprinkle a small quantity of Sulphur on a piece of burning wood, or a few live coals, in a room, all the apertures of which are closed up, till the room is filled with the fumes. (See mode of disinfecting the house after Small-pox, p. 60.)

Post-Scarlatinal Dropsy.

Homœopathists may rejoice in the fact that under homœopathic treatment this sequel of Scarlet Fever is neither so frequent nor so intractable as in allopathic practice. It is, however, a grave affection, and demands all the care and attention of a skillful physician to secure a speedy favorable result.

Symptoms.—About the twelfth day after the subsidence of the fever, the subcutaneous areolar tissue becomes infiltrated with serous fluid; there is often frequent desire to pass water, which is scanty and high-colored or smoky-looking, and generally albuminous. If examined with a microscope, the urine is seen to contain renal tube-casts. The pulse is quick, the skin dry; the child is thirsty; and the body, face, and limbs are pale and œdematous. Occasionally the cavities of the body are more or less filled with fluid. When the cavity of the chest is invaded, there are the following symptoms:—Short, difficult breathing, violent action of the heart, increasing distress and lividity of the face, often followed by death. Occasionally the kidney complication exists from the outset of Scarlet Fever, and is rather a form of the disease than a sequel.

Treatment.—Ars., Canth., and Terebinth. are the most useful medicines. The first two have been more frequently successful than the last. A dose of the one selected should be given every three hours.

Indications for the Remedies.—*Apis.* — Rapid general œdema; pale color of the skin; scanty, high-colored urine; swelling of the tonsils, difficulty of swallowing.

Arsenicum.—Scanty, dark-colored or bloody urine, with general œdema and prostration.

Bryonia—Is said to be useful in the same cases. It is probably indicated when the dropsy has followed exposure to cold, and there are muscular pains present.

Cantharis.—For symptoms similar to those under Arsenicum, and with pain in passing water.

Terebinth.—Scanty, reddish, or dark urine,

Additional Remedies. — Apocyn.-Can., Digitalis, Ferrum, Helleborus, and Hepar Sulph.

Accessories.—The lamp bath, warm baths, or sponging the body with warm water, the wet pack, and drinking cold water are of the first importance; they facilitate excretion by the skin, and relieve the congested kidneys. The free action of the skin in the treatment of Scarlet Fever is the most effectual means of preventing Post-scarlatinal Dropsy. Nothing secures this so thoroughly as the wet-pack. A nourishing digestible diet is also essential to

meet the exhaustion which usually exists. Finally, change of air is of great value.

Measles.

Measles is a disease of childhood usually unattended with danger, unless improperly treated. It is highly infectious, often epidemic; it generally attacks the same patient only once, but sometimes occurs a second or even a third time.

Mode of Propagation.—Infection. No susceptible person can remain in the same room or house with an infected person without risk of taking the disease; and it is almost impossible to isolate it in large establishments or schools. It is propagated, even after a considerable time has elapsed, by infected clothing, bedding, furniture, or wall-paper. Infection only ceases when the peeling-off of the skin is quite complete, and when all the clothing and surroundings of the patient have been thoroughly disinfected. It is strongest during the eruptive stage, and especially at the early part of this stage.

Symptoms.—After about ten or fourteen days, the period of incubation, the disease is ushered in with the symptoms of a Catarrh—sneezing, running from the nose, red, swollen, and watery eyes, a hoarse, harsh cough, languor and fever, which increases in intensity. About the fourth day of the illness the eruption begins, and appears in three successive crops, on the face and neck, on the body, and lastly on the legs. It is in the form of small circular spots, resembling flea-bites, which coalesce into blotches of a more or less crescentic form, slightly raised above the surrounding skin so as to be felt, particularly on the face, which is often a good deal swollen. It is like raspberry in color, and turns white for an instant under pressure; a dark purple is a bad sign. It is two or three days in coming out, and remains at least three days. The fever then abates, and a bran-like scurf is gradually thrown off the skin. The scurf is thrown off in the following order: On the face, behind the ears, on the neck, chest, arms, trunk, thighs, and legs. As the rash declines, diarrhœa sometimes occurs; this, unless very troublesome, should not be interfered with, as it is often beneficial.

The highest temperature, as tested by the clinical thermometer,

in ordinary cases, is 103 deg.; if above this, the case is severe, if below, it is mild. This temperature is generally reached on the fifth day, after which it rapidly declines.

Diagnosis.—Ginard calls attention to a most important symptom for the diagnosis of Measles in its preliminary stage, namely, red spots on the soft palate, more especially on the uvula, which appear five or six days before the eruption, even if there is no other symptom of the disease perceptible, and which persist until three or four days after the eruption is gone. Broussais and Valleix were fully aware of this most important diagnostic *signum morbi*. Schwarz, of Vienna, sets great value upon it for differential diagnosis. During the great epidemic of Measles in France in the year 1868 this sign was constantly observed by Bonnichon.

Formerly this disease was confounded with Scarlet Fever, but there are well-marked differences between the two, as shown below:

Tabular Differences between Measles and Scarlet Fever.

MEASLES.	SCARLET FEVER.
1. Rash comes on the fourth day.	1. Rash appears on the second day.
2. Catarrhal symptoms are prominent — watery discharge from the eyes and nose, sneezing, harsh cough, etc.	2. Catarrhal symptoms are usually absent, but there is great heat of the skin, sore throat, and sometimes delirium.
3. The rash begins near the roots of the hair.	3. The rash begins on the neck and face.
4. The rash is of a pinkish-red or raspberry color. The white streak produced by the back of the nail is not uniform, and lasts a shorter time than in Scarlet Fever.	4. The eruption is of a bright scarlet color, and by drawing the back of the nail over the skin a white streak is produced, which lasts two or three minutes.
5. The eruption is somewhat rough, so as to be felt by passing the hand over the skin, and is in crescentic groups, with natural skin between.	5. The rash usually presents no inequalities to sight or touch, and is so minute and closely crowded as to give the skin a uniformly red appearance.
6. Liquid, tender, watery eye.	6. A peculiar brilliant stare, as if the eyes were glistened.
7. The cuticle is thrown off in minute portions, like fine scales of bran.	7. Desquamation of the cuticle is usually in large patches, especially from the hands and feet.
8. The most common sequelæ are diseases of the lungs, eyes, ears, and skin.	8. The most frequent sequelæ are dropsy (especially after mild cases) and glandular swellings.

Dangers.—Pneumonia, Bronchitis, Diphtheria, and inflammation of the larynx may arise during the course of the disease. Phthisis, Diphtheria, disease of the glands and bones, chronic Ophthalmia, Otorrhœa, and skin diseases may follow the attack.

Treatment.—In the early stage Acon. should be given every two or three hours to subdue the fever. As soon as the symptoms peculiar to the disease manifest themselves, Puls. must be administered alone every two or three hours, or if necessary, in alternation with the Acon. at intervals of two hours. The cough almost invariably attendant upon the disease may be mitigated by a dose or two of Bell. or Hyos.

Indications for the Remedies.—*Aconitum.*—Febrile symptoms at the outset or during the progress of the disease. A dose every third or fourth hour.

Ant.-Tart.—Where there are decided bronchial symptoms, or nausea with white-furred tongue.

Belladonna.—Sore-throat, dry, barking cough, etc.; headache, drowsiness, or restlessness, and tendency to delirium.

Bryonia.—Imperfect or suppressed eruption, stitching pains in the chest, difficult breathing, cough, etc. For a sudden recession of the eruption, this remedy, or Acon., may be given every half-hour.

Euphrasia.—May be called for when the lachrymation is profuse.

Gelsemium.—Slow development or retrocession of the rash.

Mercurius Sol. 3x and Cor. 3x.—Ulcerous, glandular, or dysenteric affections.

Phosphorus.—Dry, hollow cough, with tendency to Pneumonia.

Pulsatilla.—Almost specific, especially for the symptoms of cold, gastric derangement, phlegm in the chest, etc. It is most useful after the fever has been modified by Aconite, and rarely any other remedies are required.

Sulphur.—After the eruption has completed its natural course, and the other remedies are discontinued. It may avert secondary diseases. A dose morning and night, for several days.

Secondary Diseases.—Measles is often succeeded by diseases of the lungs, eyes, ears, bones, or some affection of the skin. These are often far more serious than the malady itself, and gener-

ally require professional treatment. They may often be prevented by the administration of Sulphur, or other remedy indicated. Sequelæ are infrequent after homœopathic treatment. If, however, after the decline of the eruption, the patient retains a temperature above 100 deg. F., some complicating disturbance may be suspected.

Remedies for the Sequelæ.—*Inflammatory Affections of the Eyelids.*—Acon., Bell., Merc.-Cor., Sulph.

Purulent Discharge from Ear, or Deafness.—Hep.-Sulph., Merc., Puls., Sil., Sulph.

Glandular Swellings.—Calc.-Carb., Iod., Lyc., Merc.

Chest Complication.—Ars., Hep.-Sulph., Kali Bich., Spong.

Cutaneous Eruptions.—Iod., Ars., Sulph.

Styes.—Bell., Calc.-Carb., Puls., Sulph.

Consumption—Wasting, Cough, Hoarseness, etc.—Ars., Dros., Hep.-S., Phos., Spong., and Cod-liver oil.

Measles and Consumption.—Tubercular disease of the lungs, or more often of the bowels, is by no means an infrequent sequel in delicate children. Whenever, therefore, a child makes but slow or imperfect recovery from Measles, more particularly when there is tenderness, pain, hardness, or enlargement of the abdomen, Diarrhœa or irregular action of the bowels, and a high temperature, a grave constitutional disease may be suspected, and no time should be lost in obtaining professional homœopathic advice.

Accessories.—When Measles occur before weaning, the infant may refuse to nurse, in consequence of the closure of the nasal passages; resort must then be had to artificial feeding with the spoon. Cold water, gum-water, barley-water, etc., are the best drinks. No stimulants. As the fever abates, milk diet may be given, gradually returning to more nourishing food. Should the eruption be imperfectly developed, or recede suddenly, the child should be put into a hot bath, or be packed in a blanket wrung out of hot water. During the whole of the illness the wet-pack and tepid sponging, with careful drying, should be employed once or twice a day, and the linen should be frequently changed. We have emphasised "frequent change of linen," as there exists a wide-spread prejudice among mothers and nurses against clean clothes in this disease. The patient should be kept warm in bed,

with the room equably warmed to about 65 deg., but light and well ventilated, a shawl or curtain being so suspended as to protect the eyes. A fire, except in the very height of summer. After the disease has subsided the patient should be warmly clad (in flannel), and taken into the open air frequently when the weather is fine. But he must not go out-of-doors too soon, or be at all exposed to cold, drafts, or wet.

Preventives.—*Puls.* every morning, and *Acon.* every evening, for a week or ten days, during the prevalence of Measles.

Rubeola—Scarlet Rash.

This disease somewhat resembles Scarlet Fever, with which it has been frequently confounded. But added to the sore throat and scarlet rash, which ally it to Scarlatina, there are the catarrhal symptoms commonly met with in Measles; hence it has been regarded by some authorities as a hybrid of the two diseases.

Diagnosis.—Rubeola may be distinguished from Scarlet Fever by absence of that extreme febrile heat peculiar to the latter, and by the co-existence of sneezing, lachrymation, and pain in the back, with sore throat; the spots also are larger and more irregular than in Scarlet Fever. On the other hand, the sore throat distinguishes this affection from Measles, and the moist skin distinguishes it from both. There are, further, no "wheals," as in Urticaria.

Symptoms.—The spots appear irregularly on different parts of the body; they are darker and less smooth to the touch than those of Scarlatina, and not rendered white by pressure. The child perspires when the rash is out, and in proportion to the fullness of the eruption. One attack does not secure immunity from future attacks. It runs no regular course. The sudden disappearance of the rash may be dangerous.

Treatment.—At first Acon. should be given—a dose every two or three hours—until the fever symptoms abate, when it should be followed by Coffea.

Indications for the Remedies.—*Aconitum.*—Simple scarlet rash with fever.

Belladonna.—When the throat symptoms are marked.

Bryonia.—Sudden disappearance of the eruption.

Pulsatilla.—Preponderance of catarrhal symptoms.

Accessory Measures.—In all respects similar to the ones recommended for Scarlet Fever and Measles.

Chicken-pox.

This is an eruption almost peculiar to infants and young children, and bears some resemblance to Small-pox, for which it may be mistaken. It spreads by contagion.

Symptoms.—On the second day of a slight fever the eruption appears. The pimples rapidly become pustular, and in three or four days from their appearance dry up, forming scabs, which fall off in six or seven days without leaving permanent scars. The erruption comes out irregularly, and in successive crops, so that while some of the pustules are disappearing others may be forming.

It differs from Small-pox in the slighter fever which attends it; in the earlier appearance of the eruption; in the absence of an inflammatory ring around the spots in the first stage; in the vesicular character of the eruption, the spots of which become filled with a watery fluid about the second or third day, which is converted into yellow matter; and in the rapid course of the complaint.

Treatment.—In many cases little medicine will be needed; but in the early stage, *Acon.* every three hours will modify any fever that may be present. Afterwards *Rhus* should be given every three or four hours until convalescence sets in.

Indications for Remedies.—*Aconitum.*—Hot skin, thirst, and other febrile symptoms.

Ant.-Tart.—Convulsions.

Apis.—Excessive itching of the skin, or puffy swelling of the eyelids.

Belladonna.—For severe headache and any disturbance of the brain.

Mercurius Sol. 6.—If suppuration take place in any of the pimples.

Rhus Tox.—This is the best remedy for the disease, and unless any of the other remedies are strongly indicated, should be given as soon as possible.

Accessories.—Attention to diet as in Simple fever, especially if the digestive organs are impaired. Milk diet is best. Exposure

to cold should be avoided, especially in cold weather, but the room should be kept well ventilated. The child should be prevented from scratching the skin when the scales are formed.

CHAPTER VI.

DISEASES OF THE CUTANEOUS SYSTEM.

Swelling of Infants' Breasts.

The breasts of infants usually contain at birth a secretion resembling milk. This, if uninterfered with, is soon absorbed, and the swellings subside. But many nurses will not leave nature to have her own way; they consider it necessary to effect a speedy removal of the fluid by squeezing the breasts. The consequence is that inflammation and suppuration are often produced.

Indications for Treatment.—*Aconitum.*—If the inflammation is high.

Arnica.—If the redness is but slight.

Belladonna.—If the redness assume an erysipelatous character.

Hepar S.—If suppuration has taken place.

The medicine chosen should be given every four hours.

Strophulus—Red-gum—Tooth-rash.

Varieties.—Strophulus may be red or white. Red Strophulus begins as red blotches, slightly elevated in the centre; the redness soon fades, and the central elevations enlarge and form flattened pimples. They occur on the face, neck, arms, and may even extend over the whole body. White S. consists of pearly-white, opaque pimples, smaller than the preceding—about the size of a pin's head, usually on the face and arms.

Causes.—Strophulus is evidence of unsuitable diet, and consequent digestive derangement. It is also most frequent in children who are kept too much in hot rooms, and excluded from fresh air.

Indications for Treatment.—*Ant.-Crud.*—Associated with Indigestion; white tongue, vomiting, etc.

Calc.-Carb.—With chronic acidity; delicate children.

Chamomilla.—This is generally the most efficacious remedy.

Puls.—Indigestion, tendency to Diarrhœa.

Accessory Means.—The regulation of the diet; abundance of fresh air; clothing sufficient to protect the body from cold, and, at the same time, permit of the free access of air to the skin; and daily use of the cold or (at first) the tepid bath. Favorable hygienic conditions are necessary in every case, or medicine will prove inefficient. An argument in favor of these measures may be adduced from the fact that, since they have been more generally adopted, and children kept less artificially heated, and more freely exposed to fresh air, cases of Strophulus and of Nettle-rash have largely disappeared.

Intertrigo—Chafing—Soreness of Infants.

Definition.—Redness and chafing produced by the friction of two folds of skin, especially in fat children. It is seen in the groin, armpits, and neck. Sometimes a fluid is exuded, the acridity of which increases the local mischief, and an offensive raw surface is soon produced.

Intertrigo differs from Eczema in its acute course, and in the character of the secretion, which is clear, and does not stiffen linen.

Indications for Treatment.— *Calc.-Carb.* — In scrofulous children.

Cham.—Very efficacious in infants.

Lycopodium.—In very obstinate cases.

Mercurius Sol.—Rawness and great soreness.

Sulphur.—In chronic cases; much itching.

Accessories.—The parts should be well washed with cold or tepid water, and carefully dried, two or three times a day; a piece of linen saturated with Calendula lotion (a teaspoonful of the tincture to a tumbler of water) may be laid between the opposing surfaces; or, in bad cases, a lotion, composed of one part of Tincture of Hydrastis to five parts of Glycerine and five parts of water, may be applied in the same manner; dusting the chafed parts with a fine powder consisting of equal parts of Lycopodium and Oxide of Zinc. ["Sedative Saxoline" is the best local remedy in this disease.]

Parasitic Diseases of the Skin.

Parasitic diseases affecting the exterior of the body are of several varieties—*Dermatozie*, or those produced by animal parasites, and the *Dermatophsie*, or those from vegetable parasites. Having found a suitable soil, they grow more or less rapidly, and produce certain symptoms.

Tinea is the generic name of all diseases characterized by vegetable growths on or in the hair. Those most commonly found among children are the following:

1. Tinea Tonsurans.—This affection, known as the common scurfy ringworm, occurs most frequently in strumous children. Being contagious, it is not necessarily associated with deranged general health. It occurs mostly between the second and twelfth years, as irregularly circular patches, varying in size from that of a sixpence to that of a penny-piece, the hairs of which look withered, dry, thickened, and as if cut off at short distance from the roots. The skin is red or scaly.

2. Tinea Favosa.—Commonly occurs when the child is about seven years of age, and appears as an eruption of sulphur-yellow, cup-shaped crusts, the central point of each being a hair. These may run together, giving rise to a honeycomb appearance; hence the popular name, honeycomb ringworm. It is contagious.

3. Tinea Decalvans.—This disease is more frequent in young girls than boys, and consists of patches of baldness, smooth, pale and circular, one or several inches in diameter.

4. Tinea Versicolor.—This commences as small, reddish points, with irritation and itching, increased by warmth, and followed by irregular, fawn-colored patches, dry, rough, scaly at the edge, and slightly elevated, and from which scurf can be detached by rubbing. The patches vary in size from half an inch to three or four inches in diameter, and occur mostly where the body is in contact with flannel, particularly on the chest, neck and abdomen. Like the preceding, it is contagious, and its spread is favored by uncleanly habits. It is also called Pityriasis versicolor, Chloasma, variegated dandruff, and liver-spots.

5. Scabies—Itch.—This disease is caused by the presence of a minute animal parasite, the *Sarcoptes hominis*, which burrows under the skin, and gives rise to an eruption and an intolerable

itching. The eruption is vesicular, presenting numerous small, watery conical pimples, and appears most frequently between the fingers, and on the bends of the arms in children, or on the thighs and buttocks and lower part of the abdomen in infants, by whom it is occasionally contracted from uncleanly servants or nurses. The irritation increases at night and in bed.

6. Phthiriasis — Lousiness.—Three species of louse are found on the human body, namely, *Pediculis capitis*, *P. corporis*, *P. pubis*. They run about and bite the skin, producing an intolerable itching, and occasionally pustular eruptions; their eggs are called nits.

Treatment.—It is obvious that in the above diseases external applications are the chief measures to be employed in treatment. Sulphur is the great enemy to parasitic life, and its local application is the most effective means for destroying parasites. In the first four diseases cleanliness, friction, and a lotion of Sulphurous acid will generally cure. An alkaline solution of Sulphur will eradicate both vegetable and animal parasites, and may be prepared as follows:

℞ Common soda, half-ounce,
Flowers of sulphur, half-ounce,
Water, half-pint.

Simmer for half an hour. After well washing with soap, apply the clear liquid to the diseased part, and allow it to dry on. A thin layer of sulphur is deposited, which may remain for twelve hours, and then be washed off with a little vinegar and water. In very young children, water may be added to the lotion before use.

In children several years of age the free application of Sulphur ointment rapidly destroys the itch-insect and its ova. After thoroughly rubbing the body with soft soap and warm water, then washing in a hot bath, or with hot water, and wiping thoroughly dry, the superficial and effete cuticle is removed, and the burrows and parasites freely exposed; the ointment should then be well rubbed in and allowed to remain on the body all night. On the following morning a tepid bath, using yellow soap, to wash off the ointment left on over night, completes the cure. If the application of the ointment and the ablution be not thorough,

the process should be repeated once or twice. But Sulphur ointment must not be continued too long, or it will produce an irritable state of the skin, which may be mistaken for a persistence of the disease. All contaminated linen should be boiled in water; other garments should be well ironed with a hot iron, or exposed to hot air at a temperature of not less than 150 or 180 deg. Fahr, or well fumigated with the vapor of Sulphur, to destroy any insects or ova concealed in the textures of the linen. The cure is often retarded, and the disease conveyed to others, by neglecting to carry out these suggestions thoroughly.

Sep., Calc.-Carb., and Sulph. are sometimes useful, administered internally; Sepia in Ringworm, Sulphur in Scabies, and Calcarea in general unhealthy states of the skin, and for the debility which favors these diseases.

Tinea Capitis—Ringworm.

Definition.—Among the most troublesome skin disorders to which children are subject is a species of Tinea, which generally appears in the head, but is also found on the neck, arms, and other parts of the body. It is highly contagious, and when it breaks out in a school is often very difficult to deal with. It occurs in oval or circular patches, which gradually extend in size from half-an-inch to several inches in diameter, each patch being slightly elevated and scurfy. It occasions considerable irritation, and leads the child to scratch away the spores, which thus become disseminated over the head, and distributed through the air to other persons. The whole scalp may soon become implicated, and a considerable number of children speedily contaminated. The general health is not much disturbed; but it seems to find its most appropriate *nidus* in children who are underfed, ill-nourished, ill-kept, and neglected. It is, however, sometimes met with in children who are well cared for in every respect.

Cause and Mode of Propagation.—The disease is due to the presence of a microscopic fungus which attacks the roots of the hair, and produces a characteristic appearance and condition. The spores are disseminated by the atmosphere, in which they float with the dust, by contact of the diseased with the healthy, and by the use in common of towels, brushes, combs, sponges, etc.

Symptoms.—When the disease exists on the head, the hair is dull, discolored, dry, shrivelled, and brittle. But it is most easily detected by the presence of short broken-off hairs, which appear as if they had been nibbled close to the scalp. In fact, these patches of stubble are the readiest sign by which to determine when the disease is cured. If the hair is growing naturally, and free from scurf where the disease existed, it may be presumed that there is no further danger of contagion; but so long as there are the short broken-off hairs, there is room for doubt about the cure. Where the disease exists on the body, it has the appearance of red scurfy circular patches. A close inspection will discover that what hair there is looks dry and shrivelled. No special constitutional symptoms are developed.

Treatment.—Sepia, it is said, will, if given early, often arrest the progress of the disease. Calc.-Carb. and Sulph. tend to produce a healthy condition of the skin.

But its cure is best effected by the topical application of a powerful anti-parasitic (such as one part of Carbolic or Acetic Acid, mixed with double its bulk of water) by means of a camel's hair pencil. The lotion should be allowed to act for about half-a-minute or longer, according to the effect produced upon the skin; it should then be thoroughly washed off with tepid water, and afterward a wet compress applied to allay the irritation. Oleate of Mercury (one part dissolved in ten of olive-oil) is a less irritating and equally efficacious application. A few drops may be painted over, or gently rubbed into the part. One such application is usually sufficient. When the patch is large, or there are several patches, it may be advisable to operate upon a part of the diseased surface at a time, the parts left untouched being meanwhile kept moist by a diluted lotion (one volume of the above to ten volumes of Glycerine), in order to prevent the dispersion of their contagious spores. Where the disease is on the scalp, the hair should be cut close to the skin for a short distance beyond the margins of the patches before using the anti-parasitic application.

Accessories.—Strict cleanliness of person; friction; an occasional tepid bath; if the skin become irritable it may be occasionally washed in bran-water (a handful of bran boiled in a quart of

water); generous diet; for the impoverished, cod-liver oil; change of air.

To prevent contagion, the affected child should be kept apart from all others; his towels, brushes, etc., should on no account be used by any one else, and they should be thoroughly disinfected; some disinfectant should also be freely used in his room.

CHAPTER VII.

DISEASES OF THE NERVOUS SYSTEM.

Paralysis.

Definition.—Palsy or loss of motion. It usually affects one of the lower limbs, and occasionally the whole of one side, or both legs; or it may be confined to a single muscle. It most frequently appears during the period of dentition.

Symptoms.—The disease may be ushered in by feverishness, or even convulsions, and when the attention is withdrawn from the acute symptoms it is found that the child has to some extent lost its power of motion. The palsy may be at first slight, and quickly disappear, or it may gradually increase till the part can scarcely be moved at all; or the loss of power may be both sudden and complete. As all the muscles are not always paralyzed to an equal extent, the limb may become contorted by the contraction of those muscles which still retain power. Hence, in chronic cases, may result club-feet, drawing of the toes upon the sole of the foot, drawing up of the leg, drawing together of the thighs, etc.

Diagnosis.—The disease may be distinguished from Meningitis and Hydrocephalus by the absence of the acute symptoms which attend the latter diseases. It may also be distinguished from joint-disease by the fact that passive motion is easy and painless, the joints being relaxed; while in joint-disease passive motion is difficult and exceedingly painful.

Causes.—These are remarkably obscure: it has been attributed to a chill, as from sitting on a cold stone, or damp grass, and to

the irritation of teething. It is sometimes due to the pressure of a tumor or enlarged gland.

Treatment.—In the early stage of the disease Acon. should be the medicine administered. In a day or two Bell. or Gelsem. will be more appropriate. Later on Nux or Phos. may be required.

Indications for the Remedies. — *Aconitum.* — In recent cases, consequent upon cold, or attended with inflammatory disturbance.

Belladonna.—Paralysis associated with convulsions, flushed face, intolerance of light.

Gelsemium.—When the symptoms combine those of Acon. and Bell.

Calcarea Carb.—Palsy, with general debility and malnutrition; enlarged glands, and other evidences of scrofula.

Nux Vomica.—Loss of power in the lower limbs, with co-existing indigestion and constipation.

Phos.—Following debilitating losses, such as Diarrhœa, etc.; resulting from fatty degeneration.

Rhus Tox.—The best remedy for the disease when occurring as a sequel of fever.

Accessory Means.—Every effort must be made to raise the tone of the whole system by fresh air, out-of-door exercise, salt-water baths, etc. When there is much debility, Cod-liver oil is often of signal benefit. Friction and passive motion are also valuable accessories. In obstinate cases, local galvanism to the affected muscles will sometimes effect a cure. The daily application of faradization for weeks or even months may be necessary. (See Electricity, p. 54.) If the disease has been neglected for several years, fatty degeneration may have taken place, in which case electricity is inadmissible.

Chronic Hydrocephalus—Dropsy of the Brain—Water in the Head.

Definition.—A local dropsy, consisting of a collection of watery fluid within the cranium, which may be congenital or acquired.

It generally occurs within the first year, before the sutures and fontanelles are closed, so that the bones yield to pressure from within. Infants are sometimes born hydrocephalic, when it is an occasional cause of difficult labor. Instances of the disease attacking children in the seventh or eighth year have been reported, and in some extremely rare instances the disease has first appeared at a more advanced age.

Symptoms.—The premonitory indications of this disease are not very distinctive; there may be squinting or rolling of the eyes if the disease be congenital, followed by convulsions and enlargement of the head.

The most marked features are—a disproportion between the size of the skull and that of the face, the fontanelles are wider than usual, and the bones feel thin under pressure of the fingers. Emaciation is generally present, through non-nutrition; in some cases there is an unnatural fat condition. If an infant, he sucks well, even voraciously, and yet he does not grow; his bowels are constipated, and his motions unhealthy. The gradually-increasing head soon attracts notice: the anterior fontanelle pulsates, there is heat of the head, and the child becomes very restless. Fluctuation may be felt by applying the hand to the top of the head; the hair ceases to grow as usual; the face appears small and triangular; the countenance is dull, having an aged appearance; and the patient is continually wishing to lie down. In unfavorable cases the senses become impaired; paralysis sets in; and the patient dies from exhaustion, Convulsions, or Spasmodic Croup, to which such children are liable.

The duration of the disease varies from one to eight, or even ten years. Should effusion be arrested, the accumulation of serum already present remains, for it is never absorbed.

Causes.—Chronic Hydrocephalus is usually associated with the scrofulous cachexia; sometimes it follows Scarlatina, Whooping-Cough, or Measles. The most common exciting causes are—undue exposure to heat or cold, injuries of the head, suppressed eruptions.

Treatment.—The best remedies for this disease are those adapted to the constitutional cachexia; these are—*Calc.-C.*, *Sulph.*, *Ferr.-Iod.*, *Sil.*, etc., the indications for which will be found in the section on "Scrofula."

Bell., *Apis*, *Ars.-Iod.*, *Hell.*, *Dig.*, or *Merc.* may be required as adjuncts.

Infantile Convulsions—Fits of Infants.

Infantile convulsions are the most frequent of the cerebral affections of children, and usually arise from some eccentric cause, as teething, but sometimes are forerunners of Hydrocephalus. In children, a convulsion usually takes the place of the rigor that occurs in adults at the commencement of acute diseases.

Symptoms.—In slight cases the child suffers from twitchings of the muscles of the face, some difficulty of breathing, rolling of the eyes, etc. In severe cases he suddenly becomes insensible, and the muscles of the head, neck, and extremities are convulsed; the eyes are insensible to light, and turned rigidly up and to one side; the face is usually congested; but sometimes pale; the lips are livid, and there is frothing at the mouth; the hands are generally firmly clenched, and the thumbs turned inward, with the fingers on them; the feet are turned together, with the great toe bent into the sole, from the greater irritability of the flexor muscles. After one or two minutes the Convulsions cease, either altogether, or recur in a short period.

Causes.—Irritation of the brain from pressure of a tooth upon an inflamed gum, or anything which over-excites the nervous system; disease of the brain; an insufficient supply of blood to the brain, as in badly-fed children; an impure supply of blood, as in the eruptive fevers; the irritation of worms; fright; powerful emotions of the mother; suppressed eruptions; indigestion. The remote causes are hereditary constitutional taint, too early or late marriage of the parents, etc.

Treatment.—*Belladonna.*— Convulsions with determination of blood to, or inflammation of, the brain, hot flushed face, especially in stout children, who start suddenly in sleep, and stare wildly. Two drops of the tincture in a teaspoonful of water should be given early, and repeated every fifteen minutes for several times.

Chamomilla.—Spasmodic twitching of the eyelids and muscles of the face, one cheek red and the other pale. It is especially suitable for irritable children, and in fits from indigestion. True brain-symptoms require *Bell.*

Opium.—Convulsions from fright, followed by stupor, with labored breathing, and confined bowels.

Cuprum.—Red, bloated face, shrieking before an attack, which resembles an epileptic seizure.

Cina or *Ignatia.*—Convulsions from thread-worms.

Aconitum.—Fever—restlessness, flushed face—and for threatened Convulsions (in alternation with Bell).

Gelsemium.—Convulsions from cerebral diseases.

Accessory Treatment.—All clothing about the neck, chest, and body should be loosened; the head raised; the face sprinkled with water, and plenty of fresh air admitted. A warm bath, at a temperature of 98 deg. Fahr., is generally advisable, as it tends to withdraw the blood from the brain to the general surface of the body. The head should be cooled by the application of a thin damp cloth frequently re-immersed in cold water.

Laryngismus Stridulus—Asthma of Millar—Spasmodic Croup—Child-Growing.

Definition.—A spasm of the glottis, causing closure of the *rima*, generally occurring in the first sleep, and rarely lasting more than a few seconds.

Children are liable to it only during the first dentition; it may, however, occur in nervous, hysterical adults. It is due to nervous irritation, and attended with great danger, for the child may die in an instant.

Causes.—*Predisposing.*—It appears to be hereditary in some families. But it is mainly connected with a rachitic diathesis. It is found in children who have other characteristics of Rickets. The nervous system shares in the general debility, which is increased in the cases of those who live in close, unwholesome air, who are insufficiently nourished, or are fed with unsuitable food, or are brought up by hand, and of those who are delicate and reared with difficulty. These are always susceptible to the least excitement or depression.

Exciting.—The attack is often brought on by the most trifling causes; a draft of cold air, a simple cold, the irritation of a growing tooth, disorder of the stomach, constipation, diarrhœa,

derangement of any function, a mere start, a dance, excitement, or irritation of any kind.

Symptoms.—They come on suddenly, usually in the night. The child cannot inspire, struggles, gasps; presently the air enters with a crowing sound, and, for a time, the child is well. But there may be relapse after an uncertain interval. Or the breath may not return so readily as we have indicated; the larynx may be absolutely closed; for there is no noisy breathing, no "croupy" sound. The child appears to have fainted, is very pale, slightly blue, not livid, except slightly in the lips; gasps and struggles for breath. Suffocation seems imminent. Presently the spasm ceases, the glottis opens, the air enters with a whistling, cooing, or crowing sound; the color returns; and the paroxysm has passed away. Not unfrequently there are Convulsions; and particularly the muscular contractions of the thumbs, great toes, etc., which attend Convulsions.

Diagnosis.—Where these signs of Convulsions exist, the peculiar, characteristic, crowing inspiration of Spasmodic Croup is diagnostic. It may also be distinguished from Croup by the absence of cough, hoarseness, and fever, both before and after the attacks, and by the suddenness of its accession, the climax being attained almost in a moment.

Epitome of Treatment.—1. *During the Attack.*—Prompt administration of Acon. alt. Samb. (fear of suffocation, dry cough); Gels., Bell. (Convulsions); Ipec. (much mucus); Spong., K.-Bich., Cup.-M.

2. *During Convalescence.*—Phos. (cough with soreness of the chest); Spong. (dry hard cough); Carbo V. or Hepar S. (hoarseness with wheezing cough); Sulph.

Leading Indications.—*Aconitum.* — Spasm of the larynx, inducing difficult breathing; febrile symptoms. In urgent cases, a dose every ten, fifteen, or thirty minutes Acon. is of priceless value in spasmodic Croup, and often cures without any other remedy. If there be doubt as to the true character of the malady, it should be alternated with Spong. Even in true Croup, the remedy chosen should be alternated with Acon., as spasm frequently occurs during the course of the disease.

Gelsemium. — Occasional acute attacks, which do not yield promptly and fully to Acon.

Phosphorus.—Cough, with soreness of the chest, following an attack.

Sambucus.—Burning, red, hot face, hot body, cold hands and feet, during sleep; on awaking, profuse perspiration on the face and body, which continues during waking hours; return of dry heat during sleep.

Belladonna.—Red face, dilated pupils, headache.

Ipecacuanha.—Bronchial irritation, rattling of phlegm in the chest, which is at times detached, and causes vomiting.

Spongia.—Weak or hoarse voice between the attacks.

Administration.—The remedy may be given in two or three-drop doses in half a teaspoonful of water every ten minutes, for three or four times; after the attack is past, three or four times a day for two or three days, to prevent recurrence.

Accessory Means.—The child should be promptly raised up as soon as he begins to struggle, and placed in a warm bath. Meanwhile, the throat should be fomented by means of a sponge wrung out of hot water. Fresh air should be admitted to the room by an open window. Ether or ammonia may be applied to the nostrils. A dash of cold water in the face or chest will sometimes excite respiration. As it is rare for more than one attack to occur in one night, the patient may be laid down again, and comfortably wrapped up, as soon as the fit is over. When teeth are seen to be nearly through, the gums should be lanced; the same purpose may be effected by the mother's rubbing the gum with a piece of loaf sugar. To avert further attacks, and to counteract the constitutional tendency, good hygienic conditions should be secured, and exciting causes, especially such as arise in the digestive organs, should be removed. Plenty of fresh, pure air is imperatively required; the danger of catching cold is less than that of Spasm. Cod-liver oil should be given. The constitution must be strengthened by generous diet, adapted to the age of the child. The cold or tepid bath should be in daily use. Excitement should be avoided; quiet fondling is better than romping.

Chorea—St. Vitus's Dance.

Definition.—A disease characterized by convulsive movements of the limbs, occasioning ludicrous gesticulations, and arising from incomplete subserviency of the muscles to the will. It has been wittily termed insanity of the voluntary muscles.

Causes.—Fright, irritation from dentition or worms, onanism, deranged uterine functions, Hysteria, and descent from nervous, hysterical women. A frequent cause is "contagion of the eye"—that is, patients seeing others suffering from the disease are liable to contract it. Thus stammering and stuttering, local manifestations of Chorea, are frequently the result of seeing or imitating others having the same defect.

Epitome of Treatment. 1. *From Fright.*—Acon., Ign.

2. *From Worms.*—Cin., Sant., Merc., Ign., Spig.

3. *From Scrofula or other Cachexia.*—Iod., Ars., Ferr. (with anæmia), Sulph. See also the Accessory Treatment under "Scrofula."

4. *From Rheumatism.*—Cimic., Spig.

5. *From Causes not Traceable.*—Cup. M., Bell., Agar., Stram., Hyos., Zinc., Ars. The last-mentioned remedy is an extremely valuable one, especially in uncomplicated cases. In our treatment it has proved of the greatest value, and often curative.

In febrile, rheumatic, anæmic, or strumous patients, a larger range of remedies is generally required.

General Measures.—The most important part of the treatment of Chorea consists in the use of moral influences, especially when the disease does not occur from any appreciable cause. (1) There must be removal from too sympathizing friends, the patient being placed under the care of a kind but firm guardian. (2) He must be encouraged to exercise his will in the control of the muscles; if the hands be affected, he should be required to carry crockery or other fragile articles; or if the lower limbs, to walk on short stilts, etc.; if the muscles of speech be implicated, inducing stammering or stuttering, "the best way is for the person to humble himself to the infant state, and be taught anew the use of language from those ingenious instructors who teach the deaf and dumb, and systematically learn to shape, slowly and deliberately, his mouth into the form requisite for definite enuncia-

tion. By practicing thus at leisure, and before a looking-glass, he may gain great control over the articulating muscles" (*Chambers*). (3) The patient must not be allowed to associate with others similarly affected; nor should his disease be enlarged upon in his presence; his attention should rather be diverted from it as much as possible. (4) *Galvanism.*—Benedict declares that out of twenty cases treated by him with the constant galvanic current, not one has failed to recover. (5) When the constitution is feeble, the best hygienic measures must be adopted.

Forcible control of the muscles only aggravates the disease.

[Cerebro-Spinal Fever.]

[Definition.— A malignant disease, occurring in general or limited epidemics, usually appearing suddenly, and characterized by headache, vomiting, painful contraction of the muscles of the back and neck, an over-sensitive and mottled or blotchy skin, and at times delirium or coma, and other symptoms of inflammation of the membranes of the brain and spinal cord.

Varieties. — (1) *Simple* or *Ordinary* Cerebro-spinal Fever represents the disease as it appears in the greatest number of cases. (2) *Abortive* Cerebro-spinal Fever runs a mild and rapid course, and is an instance of the incomplete action of the epidemic influence. (3) *Intermittent* Cerebro-spinal Fever is characterized by remissions and exacerbations of symptoms, and resembles intermittent fever, in having periods of activity and of repose. (4) *Fulminating* Cerebro-spinal Fever is that form in which the patient is struck down without warning, in the midst of perfect health, and speedily falls into a state of collapse, usually terminating fatally in from a few hours to two or three days. As Stille has said, "the first symptoms of the disease are the first phenomena of death."

Cerebro-spinal Fever is popularly known as Spotted Fever, or Cerebro-spinal Meningitis, and has prevailed in various sections of this country since 1806. It attacks principally children from three to twelve years of age, and but rarely occurs in the middle or advanced period of life.

Symptoms.—The onset of the disease is nearly always sudden. The patient is seized with a violent chill; terrible pain in

the head, extending to the back of the neck, nausea and vomiting supervene. Tetanic stiffness of the muscles of the spinal region soon follows. The head is drawn back, the spine curved (opisthotonos), the forearms flexed upon the arms, and the legs upon the thighs (Fig. 9). Delirium comes on, and general convulsions, especially in children, may occur. The skin is extremely

FIG 9.

Attitude of the child in severe Cerebro-spinal Fever (after Smith).*

sensitive to touch and pressure. After the second day herpetic eruptions, or, at times, red, purple or black, non-elevated spots, varying in size from a pin's head to a twenty-five cent piece, appear on various parts of the body. There is intolerance of light and noise; and temporary or even permanent blindness and deafness sometimes supervene. The tongue is usually at first white and moist; in prolonged cases it may become dry, yellow or brown. The taste is lost; the bowels are constipated or natural; toward the end of an attack diarrhœa or involuntary discharges may take place. The fever is generally moderate, but runs an irregular course. The pulse presents most remarkable variations; it is at first slow, then accelerated, and always diminished in strength and volume. The respirations are at first quickened; later they become shallow and irregular. The symptoms reach their full intensity from the third to the sixth day. As the disease progresses, if the case is to terminate fatally, the repression becomes more marked, the stupor deepens, convulsive muscular movements appear, the temperature rises, the pulse

* See Kippax on Fevers.

becomes rapid, small and scarcely perceptible, and the patient dies. In cases that recover, after a few days the vomiting ceases, the head and back pains slowly subside, and the strength gradually returns. Convalescence may be protracted and incomplete, from the occurrence of such sequels as partial paralysis, strabismus, deafness, debility and hydrocephalus. Relapses are not uncommon, and are often fatal.

Diagnosis.—Cerebro-spinal Fever is distinguished from typhus fever by the abruptness of the attack, the acute pains in the neck and spine, the contraction of the cervical muscles, the extraordinary variation in frequency and volume of pulse, the eruptions, and the general cutaneous hyperæsthesia. From tuberculous basilar meningitis it is to be distinguished by its rapid course, by eruption, and by the absence of scrofulous and phthisical affections. A pathognomonic sign of tuberculous meningitis is the producing of a vivid red mark when the finger is drawn across the skin of the forehead. It may be differentiated from malignant scarlet fever, with which it may be confounded in the early stages, by the absence of both the peculiar redness of the palatine arches and the efflorescence. From pernicious fever it may be distinguished by the age of the patient, the locality, and the season of the year.

Prognosis.—Cerebro-spinal Fever is one of the most dreaded of epidemic diseases. The mortality varies from thirty per cent. in mild epidemics to seventy-five per cent. in severe epidemics. The prognosis is full of uncertainty, and should always be guarded. Cases which may appear slight at first frequently prove fatal at the close. The first week is the time of greatest danger; those who survive that have a fair, though not certain, prospect of recovery. In fulminant cases death is by far the most common termination. Unfavorable symptoms are: high degree of excitement, early depression, return of vomiting, enlargement of the tongue, intense headache, continuous coma, recurring convulsions and irregular respiration.

Epitome of Treatment.—1. *Simple Variety.*—Gels., Verat. Vir., Bell., Cicuta, Actea.

2. *Abortive Variety.*—Gels. (pain in cervical and occipital region).

3. *Intermittent Variety.*—Gels., Arseniate of Quinine.

4. *Fulminating Variety.*—Verat. Vir., Actea, Ars., Phos. (extensive petechiæ).

5. *Typhoid State.*—Bry., Rhus., Ars.

6. *Heart Symptoms.*—Digit. (irregular pulse), Cocculus, Ars.

7. *Spasms.*—Actea, Cicuta, Monotropa.

8. *Coma.*—Opium.

9. *Effusion.*—Helleborus.

10. *Depression—Weakness of Memory.*—Zincum.

11. *Paralytic Symptoms.*—Plumbum.

12. *Deafness.*—Silicea, Sulphur.

Accessory Measures.—The diet should be simple and nutritious; milk, meat juice, and meat broths should be administered at regular intervals during the continuance of the fever; solid food should be allowed as early in convalescence as the patient is able to bear it. Stimulation may be resorted to when the signs of failure in nervous power occur. The pulse and first sound of the heart are the best guides as to the amount to be used. A hot mustard foot-bath should be employed as early as possible. Hot water applications, either continuous or intermittent, and applied by means of a sponge every two or three hours, should be made to the spine. Quietude is all important, and when there is photophobia the room should be darkened. Change of air is of great value during convalescence.]

Stings and Bites of Insects.

Internal Treatment.—*Aconitum.*—Swelling, inflammation, fever.

Arnica.—After the subsidence of fever, if there remain tenderness and smarting.

Ledum Palustre.—Said to be of great efficacy in the mosquito bites.

Rhus Tox.—Has been used with good effect.

Accessories.—The remedy given internally may be employed as a lotion externally at the same time. If the sting of the insect be left in the wound it should be extracted as soon as possible. [Dilute Acetic Acid or "Sedative Saxoline" will be of service.]

CHAPTER VIII.

MISCELLANEOUS AFFECTIONS.

Cyanosis—Blue Disease.

Definition.—A peculiar livid blue or purple condition of the skin, due to malformation of the heart.

Symptoms.—The livid color of the skin and nails, and the purple color of the lips and cheeks, are quite characteristic. Children suffering from this disease are ill-nourished and frequently rickety. They are easily tired, liable to palpitation, and to pant on slight exertion; the temperature is also below the healthy standard.

Causes.—As found in children, it is frequently due to malformation of the heart—as non-closure of the *foramen ovale*, deficient ventricular septem, etc.—which cause imperfect aeration of the blood, the venous blood being passed forward with the arterial current. It may, however, appear as a symptom of Croup or Cholera when the flow of blood through the lungs is obstructed; or of partial obstruction of the pulmonary artery with systemic venous engorgement.

Treatment.—When Cyanosis is present at birth, and continues for several months, it is probably due to malformation, and consequently can only be palliated. All that can then be done is to place the child in the midst of good hygienic surroundings; to clothe it well; and to favor nutrition by providing good food, easy to be digested—as fowls, game, etc.

When curable, Digitalis (want of vitality), Belladonna (congestion), Arsenicum (collapse), or Veratrum Album (cold hands and feet), will be the most suitable remedies.

Crying.

Significance of Crying.—The crying of an infant is expressive, and varies much in character. "In cerebral affections it is sharp, short, and sudden. In lesions of the abdomen, exciting pain, it is prolonged. In inherited Syphilis, it is high-pitched and hoarse. In inflammatory diseases of the larynx, it is hoarse, and may be whispering. In inflammatory diseases of the chest, and in severe Rickets, the child is usually quiet and unwilling to cry, on account of the action interfering with the respiratory functions."—(*Dr. Eustace Smith.*)

Causes.—In many instances, infantile crying and fretfulness depend upon some mechanical cause—tight, or creased clothing, wet napkins, the prick or scratch of a pin, improper or excessive feeding, etc. Crying is also the language by which its wants are expressed; but it is a mistake to suppose that the child should be presented to the breast, or that it is hungry, merely because it cries. The time that has elapsed since the previous nursing will determine the necessity or otherwise for feeding the child. Crying is, however, often due to Colic, wind, or other symptoms of Indigestion in hand-fed children, or in infants suckled by unsuitable wet-nurses. For a proper investigation of the cause of crying, the infant should be fully undressed in a room of a comfortable temperature. By this method the form and movements of the chest and abdomen; the state of the skin, whether hot or cool, moist or dry; the presence or absence of any eruption, and any other peculiarity present, may then be easily detected.

Indications for Treatment.—*Aconitum.*—Hot, dry skin; full pulse; restlessness.

Belladonna.—Crying without apparent cause; heat of the head; sparkling eyes; flushed cheeks; startings during sleep; Constipation.

Bryonia.—Constipation.

Camphor.—When Cham. proves insufficient, and the child seems in great pain. (Dose: one or two drops upon a little loaf sugar; after crushing it well, a small portion of the powder may be placed on the tongue.)

Chamomilla.—Constant crying, with drawing up of the legs; pain in, or distention of, the abdomen; looseness of the bowels.

Coffea.—Nervousness, restlessness and tossings about; sleeplessness.

Accessories.—Hot flannel applied to the abdomen, or rubbing with the warmed hand; placing the child on the knee with the stomach downwards, and patting the back gently, will often prove soothing. A warm bath is sometimes very beneficial.

Morbus Coxæ—Scrofulous Disease of the Hip-joint.

Definition.—Chronic or Strumous inflammation, sometimes originating in the synovial membrane or ligaments, and sometimes in the articulating surfaces of the bones, commonly met with in children, and before the disease assumes an active form, often attributed to "growing pains."

Symptoms.—The first distinctive symptoms are—slight limping-pain in walking, with disinclination to allow the entire weight of the body to rest on the affected limb. At this stage, the pain is chiefly referred to the knee. There may be even slight swelling in the knee joint, so as to lead to error regarding the real nature of the disease. This is probably due to pressure on, or irritation of, the branch of the obturator nerve distributed to the capsular ligament and *ligamentum teres*, referred to the terminal cutaneous branches of the same nerve. The real seat of the pain may be proved by pressing either the front or back of the hip-joint, or by jerking the thigh-bone against the joint, as by a sharp tap on the heel, when pain will be felt in the hip. On close observation, the limb will probably be found slightly flexed, and there may be feverishness and restlessness in the evening, and perhaps slight twitching of the thigh in the night. As the disease progresses, the lameness becomes very decided, and the nates of the affected side waste and become flabby; the limb is shortened, either by caries of the neck of the femur or by ulceration and destruction of the ligaments of the joint, and consequent dislocation of the joint upwards on the *dorsum ilii*. This is termed spontaneous dislocation. There is increased fullness about the limb, the pains increase in severity, especially at night, and there are often violent startings of the limb during sleep Abscesses form, and after-

wards burst on the nates or groin, or burrow deeply and discharge their contents into the rectum. Wasting of the nates of the affected side is one of the earliest symptoms of disease of the hip.

The duration of the disease varies from two to three months to several years. But it is much modified, both as to duration and results, by skillful treatment.

Indications for Treatment.—*Aconitum.*—If recognized in its early stage, a few doses of Acon. may be of service; the presence of fever further indicates this medicine.

Belladonna.—In the early stage when the patient suffers great pain.

Calcarea Carb.—At the commencement of the second stage, when suppuration is threatening.

Colocynth. — Useful when there is much neuralgic pain attending the disease

Mercurius Cor.—When the patient has a sallow complexion; syphilitic taint.

Silicea.—When the ulceration has taken place in the bones.

Sulphur.—As an intercurrent remedy in protracted cases.

Additional Remedies.—Ars., Cantharis, China, Graph., Hep.-S., Nit.-Ac., Phosph., Puls., Rhus Tox., Staph.

Accessory Means.—Rest, with the limb kept straight, and absence of articular pressure: the latter is probably the more important element; surgical appliances are necessary to insure it. The diet should be nourishing and include Cod-liver oil. Pure air, especially change to the seaside, will expedite the cure. When abscesses discharge, they should be kept free from fœtor by means of Carbolic oil.

Spina Bifida.

Definition.—A congenital hernia of the membranes of the spine through a rent in the walls of the spinal canal, the rent sometimes enclosing nervous substance.

Symptoms.—Locally, there is a tumor, on the back, near the spinal column, either covered by natural-looking, or by attenuated skin, in which case the tumor is semi-transparent, and resembles Hydrocele; or the true skin may be altogether wanting, when the tumor is bluish, and moist with the oozing of serum. On exami-

nation the hole in the spinal canal can readily be felt, and the contents of the sac can be pushed back to some extent, but the proceeding frequently increases the size of the head or elevates the fontanelles. Palsy of the limbs, or of the sphincters (with retention of urine, and involuntary evacuations), and Convulsions, are not infrequent.

Causes and Prognosis.—It appears to be caused either by pre-natal dropsy of the spinal membranes, or by arrest of bone formation. When the tumor is small and does not enlarge, or when it is attached by a long thin pedicle, a cure may probably be effected; even in cases in which the tumor has a broad base, and enlarges rapidly, or ulcerates, a cure may occasionally be effected; but the natural tendency of Spina Bifida is towards death.

Treatment.—When the child is otherwise in good health, and the tumor does not threaten to ulcerate, it should be supported by a well-padded concave shield, of such dimensions as to exert slight pressure on the contents of the tumor. When the tumor is pedunculated, a soft bandage round the body and tumor, to support the latter, is all that is necessary. When convulsions or ulcerations are present, professional assistance is imperative. When there is only a slight connection between the tumor and the spinal canal, removal of the tumor may promise well; removal of fluid by the trocar, or pneumatic aspirator; and the subsequent injection of Apis Mel., or Iodine, are other resources of the surgeon's art.

Remedies.—Calc.-Carb. or Calc.-Phos. favors the formation of bone. The bones occasionally appear to grow and obliterate the connection between the spinal canal and the tumor, when a cure generally results. To this end Calc. is of great assistance.

Apis.—The internal and external use of this remedy tends to remove the contents of the tumor by promoting absorption.

Lateral Curvature of the Spine.

Definition.—The spine is curved sideways, usually to the left, and also somewhat contorted by twisting of the vertebræ on their long axis, at each bend, from accidental disturbing causes, and not from any abnormal constitutional condition, as in angular curvature.

Age of Patients.—Lateral Curvature generally commences from about the tenth to the fourteenth year or upwards, when the spine has nearly reached its full length. The deformity makes the most rapid progress in the youngest subjects, for when the vertebræ lose their spongy texture and become more compact, they yield less readily to the irregular forces which severally act upon them. By about the seventeenth year, when the skeleton has nearly attained maturity, curvatures have generally reached their maximum degree; they are then both unlikely to get much worse, and indisposed to yield to treatment.

Sex and Social Status.—The distortion is almost peculiar to girls, and to patients of the well-to-do class; and the reasons may be easily understood. To maintain in healthy vigor the muscular appendages of the spine, proper exercises, regular and varied, are necessary. But in the case of females of the wealthy class such exercises are much neglected as puberty approaches. Previously they mix with and join in the games of the opposite sex; but now they tend to become reserved, and begin to give evidence of their feminine character.

In their education, too, nearly the whole of their energies are demanded for mere accomplishments and learning; while the health and bodily development receive but an inconsiderable share of attention. Sitting at lessons and the piano for many hours, without the relaxation of free open-air exercises, naturally causes exhaustion, which tempts them to stoop or lean on one side or the other, and thus to an extent relieve the muscles of the spine of the task which belongs to them exclusively. But when such patients stoop or bend excessively, not only are all the ligaments of the spine—elastic and others—brought into a state of tension, but the various tendinous expansions, layers of fasciæ and inter-muscular septa, connected with the muscles of the back, are extended and act as ligaments in upholding the body.

The result of indulging in these lounging habits is, that the ligaments and allied parts become overstretched and unqualified to knit the bones together. It is as if the shrouds of the mast of a ship had been slackened and required bracing, and owing to the loosened and relaxed condition, the muscles are overtasked to keep the column erect (*Shaw*).

The faulty habits in question occur more frequently in girls than in boys, partly because their constrained habits call into requisition artifices of this nature, and partly because their mode of dress conceals such malpostures as would be seen in boys and condemned by their superiors.

Formerly, Lateral Curvature was considered a symptom or consequence of the softening of the bones peculiar to Rickets; but this was an error, as the following tabular arrangement will show:—

DIFFERENCES BETWEEN LATERAL CURVATURE AND RICKETS.

LATERAL CURVATURE.	RICKETS.
1. Begins from ten to fourteen or fifteen years of age.	1. Is a disease of early childhood.
2. Females are generally the subjects.	2. Males and females are equally affected.
3. Is most common in the rich.	3. Is most common in the poor.
4. Is the result of accidental causes, and the health may be unaffected.	4. Is a constitutional disease from mal-nutrition, involving more or less all the structures of the body.
5. The spine is the only part primarily curved, the ribs and scapulæ being distorted only as a consequence.	5. All the bones of the skeleton are incurvated, or give evidence of a generally prevailing disorder, and the lower extremities are distorted rather than the spine.
6. The intervertebral substance is chiefly involved, and all parts of the skeleton attain their normal development, the trunk only being somewhat shorter and broader.	6. An adult is diminutive throughout; the stature is short, the head is large, the trunk is also large, but the hips are narrow and the legs short.

Causes.—Predisposing.—To render the subject intelligible, a reference to the anatomical arrangements of the spine seems necessary. The elasticity and flexibility of the spine is provided for by a layer of fibro-cartilage interposed between each of the twenty-four vertebral bones, and acting like so many buffers or cushions. This intervertebral substance is not of uniform thickness, being thicker in the cervical and lumbar regions in front, and in the dorsal region behind; and it is this difference in their depth, more than in the bodies of the vertebræ, which produces the characteristic curves of the spine. The arrangement permits of a limited inclination in every direction, and a slight degree of rotation, so that the movements of one vertebra upon another

have been compared to those of a ball-and-socket joint. Now these twenty-four discs of cartilage are compressible to such an extent that an adult loses about half-an-inch of his height after having been in the erect posture all day, and does not regain it till after he has been lying at rest for several hours. Their united thickness is about 3·875 inches; so that nearly one-eighth is lost by the day's compression. If then the weight of the body falls day after day unequally on the spinal column, it must be evident that the cartilage will become compressed on one side more than on the other, and if long continued, this compression may become permanent.

Further, the vertebral bones themselves, in growing persons, are porous and spongy, and will yield somewhat to unequal pressure. Moreover, the borders of the articulating surfaces consist of cartilage, and the muscles and ligaments, which are numerous and act in many directions, are weak and immature, and a habit, therefore, of leaning on one side may render a curvature permanent. The latter causes, however, are but inconsiderable, lateral deformity depending more generally upon the density of the layers of fibro-cartilage. From *post-mortem* examinations of one hundred and thirty-four persons whose spines were crooked, it was found that in two-thirds the bones were perfectly normal, and that the most frequent cause of curvature existed in the intervertebral substances. On the concave side of the curve these substances were almost obliterated, and on the convex side were preternaturally thick. At the same time, the muscles on the convex side were lengthened, and degenerate in structure.

Producing Causes.—It is probable that the lumbar curve is first produced, this part of the spine being most flexible, and having a most unstable support—the pelvis. There is a particular posture into which persons are disposed to place themselves to obtain relief when fatigued, and in which the spine is bent laterally at the loins—that is, standing at ease on the right leg, with the knee of the left a little bent. This posture, which is a common one with persons who stand much, causes a large sweeping curve from the dorsal region to the sacrum, and if the habit is frequently indulged in by a growing person, the curve is likely to become a permanent one. Other causes may be occupa-

tions and games which tax one side of the body more than the other, or which require the raising of one shoulder-blade and arm, crossing the legs, sitting on one side, leaning on one hip, or bad postures while sewing, writing, drawing, reading, playing the piano, carrying a child on one arm, and the exercise of many kinds of handiwork. Even bad postures in lying, sitting, and standing are liable to cause lateral curvature. All these causes are much more likely to produce deformity when combined with insufficient unrestrained open-air exercise. One leg being shorter than the other, walking with an artificial leg, Hip-joint disease, Rickets, paralytic and rheumatic affections involving the lower extremities, may also cause distortion.

Symptoms.—The most obvious one is the presence of a double curvature, something like the italic letter *f:* the one is primary, and caused by bad postures; the other is a compensatory curve in the opposite direction, to restore the equilibrium disturbed by the primary curvature. The waist is short and broad, and there is diminished length and increased breadth of the trunk generally, with disproportionate length of the extremities. If the patient places herself in a lounging posture, the clumsiness of the waist will be aggravated; but by requesting her to make a vigorous effort to raise her body upright, the length of the waist will be perceptibly increased. In slight cases, the deformity in the waist and loins may be best detected by requesting the patient to bend, as in making a bow, when the deformity at once comes into view. One of the shoulder-blades, or one side of the bosom, projects, and the right shoulder and right side of the chest are preternaturally high and rounded, while the opposite are depressed and concave. In like manner, while one hip projects the opposite is curved inwards.

Treatment.—This must be regulated by the nature, extent, and cause of the deformity. If treatment is neglected, curvatures, however slight, will certainly get worse; for the extreme flexibility of the spine in youth, while it offers a favorable condition for cure, equally tends to an aggravation of the deformity if treatment is neglected. Further, as rigidity of the column increases with years, so the prospect of improvement correspondingly diminishes; at the same time, and for the same reason,

curvatures of long standing in persons of mature growth are less likely to grow worse.

1. Calisthenics.—A suitable course of Calisthenic exercises in the open-air, or in a well-ventilated room, must be intelligently adopted, and graduated to the strength of the patient; they should be contrived so as to bring the left arm and leg into play, and be made pleasant rather than irksome. This is an important part of the treatment. The exercises must be persisted in for a considerable time, as the desired improvement can only be gradually brought about. Sufficiently frequent changes of posture, whether in standing or sitting, are absolutely necessary for patients whose structures are immature and fragile. Patients need regular supervision to correct the various faulty postures which we have previously enumerated. Reclining in the supine posture on a slanting board, with projecting supports for the armpits, interrupted at proper intervals by active out-of-door exercises, seems to offer in many cases an excellent method of correcting the deformity, and at the same time providing for the healthy development of the growing frame.

The inclined seat is another contrivance of great value in many cases, if used with intelligence and care. The slope inclines from left to right—*i. e.*, from the convex to the concave side of the lumbar curve. The degree of obliquity of the seat must be regulated by the nature and extent of the deformity; if it is too great, or used for more than a short period each day, it may cause great fatigue or even injury to the muscles, necessitating the discontinuance of the treatment till the damage thus induced has been repaired.

"Mechanical Support," as it is termed, is scarcely ever necessary, and is, in some cases, productive of the worst results. Machines are constructed something like stays, having a steel band passing round the hips and abdomen, steel rods, with crutch-handles on each side, etc. These require screwing up or adjusting once or twice a week by a specialist, are most objectionable instruments, and (according to our observations) intensify the evils from which the patient suffers. To fix a portion of the body which nature intended to be most mobile, immovably in one of these machines, not only interferes with the respiratory move-

ments, but weakens, and subsequently destroys, muscular power —that power on which we rely for maintaining the erect posture when treatment is suspended. In incipient curvatures, from the age of ten to fourteen or fifteen, when the flexible and yielding body is continually varying its size and shape, metallic instruments, which retain one unchangeable form, are most pernicious. Later in life, the vertebræ and ribs become more fixed and solid, and a better fulcrum can be obtained at the pelvis for the contrivances which are intended to strengthen and support the column. Unfortunately, however, by the time these instruments could be applied with less injury to the structures, the curvatures have become too rigid for them to be of any avail.*

We have repeatedly advised the removal of tnese machines, and adopted rational measures and treatment, to the great relief of patients, and their subsequent early recovery.

2. **Remedies.** — In many cases constitutional treatment is necessary to correct or prevent the consequences of the faulty habits which have led to the deformity. One or other of the following remedies is most likely to be required:—Calc.-Phos., Calc.-Carb., Phos.-Ac., Puls., Nux Vom., Sulph., Silic., Arn., Rhus, etc. Arnica or Rhus may also be used in the form of a lotion or liniment, to be rubbed into the overstretched and weakened muscles and tendons.

Combined with medicines, the best hygienic conditions should be adopted. Good diet, including, if necessary, Cod-liver oil; pure air, if possible sea or mountain air; bathing the whole body, especially the back, with cold (at first tepid) salt-water, followed by vigorous friction and shampooing, especially directed to the spine, to strengthen its muscles and ligaments; a mattress instead of a feather bed to sleep on; early hours for rising and retiring; warm, easy, and light clothing, especially avoiding stays, tight-fitting boots, garters, etc. [See Franklin on Spinal Curvature.]

Rickets.

Definition.—A constitutional disease of early childhood, from malnutrition, consisting essentially of a lack of earthy phosphates

* I have seen the greatest benefits result from the use of well-constructed instruments.

in the bones, and manifested by curvature of the shafts of the long bones, and enlargement of their cancellous extremities, so that they yield to pressure, and are liable to harden afterward in unnatural forms; there is also arrest of the growth of the bones.

Symptoms.—Profuse perspiration on the head, neck and upper part of the chest, with dryness and heat of the abdomen and lower limbs. The upper portion of the body has always increased moisture, which the slightest exertion or heat aggravates, and on the patient falling asleep the perspiration is at once so increased as to make the pillow wet. The child also desires to lie cool at night, and in the coldest weather kicks off or gets outside the bed clothes. These symptoms precede the deformities of the bones. A later symptom, especially marked in severe cases, is dread of movement from extreme tenderness of the surface. He wants to be let alone, and manifests signs of uneasiness on being touched or danced in the arms, preferring to sit quietly or to lie down. As the disease advances, he lies motionless in bed, and cries at the approach of persons accustomed to play with him. The appetite is generally voracious, the patient often desires food soon after a meal, and the peristaltic action of the intestines is so rapid that the food is hurried, and passes almost unchanged along the alimentary canal. The bowels are irregular, confined for a day or two, and then relaxed for an equal period; there is generally a good deal of straining, and the motions are extremely offensive and mixed with mucus. The child becomes dull, neglects his playthings, and usually gets thin; sometimes he looks plump while his flesh feels soft. In the day-time he is drowsy, but restless and uneasy at night (*Dr. Eustace Smith*)

Rickets generally becomes evident in children during the first year of their age; and it is probable that a child who is not idiotic or weakened by some recent acute disease, and who cannot walk at eighteen months of age, is either rickety or paralyzed.

Changes in Bones.— The changes in the bones generally commence when the tenderness and dread of movement are first complained of. In slight cases, the affection of the bones may be very limited—the ankles a little sunk, the shins bent, the spine curved, the fontanelles remain abnormally open –and dentition be retarded or arrested; but, in aggravated cases, physiognomy and general appearance are very peculiar.

The skull undergoes remarkable changes; it is larger, at least relatively, and often absolutely; but the change in shape is most marked; it loses its natural arched form, and becomes flat, both at the top and around; the frontal and parietal protuberances are increased; the frontal, coronal, sagittal, and sometimes even the lambdoid sutures are depressed (*Gee*), and slow in closing. The face is small and triangular, with a narrow sharp-peaked chin, and projecting teeth which tend to decay, or to drop out undecayed; and dentition, both the first and second, is often delayed.* A rickety head may be distinguished from a hydrocephalic, by the fontanelles, which are depressed in the former, and elevated in the latter. The chest is narrow and prominent in front, hence the popular term, pigeon-breast; the abdomen is often large, and, contrasted with the narrow and distorted chest, appears much distended; the spine is variously curved; the pelvis deficient—the promontory of the sacrum and acetabula being pressed together, the cavity is rendered perilously small for child-bearing; and the whole structure is stunted. The most characteristic alteration in the bones is beading of the ribs, which can usually be detected earlier than any other sign.

Causes.—Rickets is not a Diathetic disease, in the sense in which Tuberculosis and Syphilis are; it is the result of certain known causes, without which the disease cannot be produced, but under the influence of which children become rickety. It often arises, however, in children of parents who, though naturally healthy, live in disregard to hygienic laws. As it is strictly a disease of the nutritive processes, it will readily be perceived how such conditions as the following should tend to produce it: ill-health or weak constitution of the mother affecting the nutrition of the child before birth, and after birth, by deteriorating the quality of the breast-milk; improper feeding generally, badly-ventilated rooms, damp, cold, dirt, too little sun-light, and neglect of exercise. The continued influence of these causes will produce that unhealthy condition of the body of which Rickets is the direct consequence.

*If the ninth month passes without the appearance of a tooth, the cause should be carefully inquired into, and will almost always be found in Rickets (*Sir W. Jenner*).

Consequences.—Softening and curvature of the bones often deprive a child of the use of its limbs; the deformity of the thorax produces difficult breathing; and the abdominal organs, especially the liver, are constantly compressed in consequence of sedentary habits. Sometimes there is inflammatory swelling of the bones, with suppuration, and caries; and derangement of the digestive organs, wasting, hectic fever, etc., make their appearance, if they did not exist before. Under favorable treatment, however, the bones become very firm in adult life, and are remarkably strengthened by strong ridges on their concave sides.

Treatment.—This must be radical, and if commenced early the best results may be expected, for although one of the most common of children's diseases, it is yet one most easily arrested.

Phosphoric Acid.—Rickety affections of the bones, with pains in the limbs, Diarrhœa, and other symptoms of Hectic.

Silicea.—Corrects the perspiration about the head and upper portion of the chest, and the sensitiveness before described; it also controls the tendency to the increased growth of cartilage.

Calc.-Phos.—In many cases of Rickets this salt is of great utility, and if the child is fed by the breast, both the mother and child will be benefited by the medicine. Phosphate of lime has the power not merely to correct deficient consolidation of the bone, but equally to correct the consentaneous unnatural growth and malnutrition of the soft tissues of the body.

Asaf., Phos., and Sulph. are also recommended.

Accessory Means.—The child should, if possible, reside in the country, where the air is dry and bracing, enjoy abundance of sun-light, and take suitable out-of-door exercises. These wonderfully aid the cure, by imparting tone to the digestive organs, energy to the nervous system, and, in short, invigorating the whole constitution. Patients not able to walk should sit or recline in the open air, warmly clad, during suitable portions of the day. This will be found far more helpful to recovery than passing the chief part of the day in the confined air of a sick-room. Further, tepid and cold bathing, especially in sea-water, followed by frictions, especially down the back, continued for five or ten minutes. In the evening, again, the frictions should be repeated. Well-ventilated rooms, strict cleanliness, and nourishing food,

which should be well masticated, or if the teeth be inefficient, pounded in a mortar, are also necessary. The food should include milk, meat, animal broths, and cod-liver oil; the latter has quite a specific action in this disease. The administration of a moderate quantity of finely-scraped raw-beef, followed by a dessert-spoonful of Tokay or Malaga, once or twice a day, is to be particularly recommended.

Cod-liver oil is an important remedy, but should only be given in small doses, ten to twenty drops at first, and the quantity gradually increased to a teaspoonful. During its administration the evacuations should be examined, for the appearance and odor of the oil in them are signs that the quantity should be reduced. (See page 38.)

Mechanical Support.—On the subject of mechanical support, Mr. J. C. Foster remarks: "I am quite sure none yet invented is of any service. Splints on the outside and inside of the leg, boots, irons, etc., only add to the weight which already overburdens the feeble limb." Notwithstanding this excellent authority, we have often used splints with perfect success. The best for curvatures of the lower limbs are simple straight wooden splints, kept in place by a strong elastic bandage, or even an ordinary cotton roller. Very delicate children should first be treated by such remedies as we have already named, especially cod-liver oil; and the splints applied as the patient gains strength.

Cure of Pigeon-Breast.—In most instances this deformity can not only be improved but radically cured, if the following simple method be adopted sufficiently early—that is, before the cartilages of the ribs have become partly ossified. The object is to develop the muscles of the chest concerned in breathing. Pressure is to be applied by the hands of an assistant, placed one on the projecting part of the breast-bone, the other between the shoulder-blades, the pressure being gentle but firm, and carefully increased as the patient takes five or six deep inspirations. The tendency of this pressure, if skillfully applied, combined with the inspiratory efforts, is to enlarge the sides of the chest in some measure at the expense of the projecting portion of the breast-bone. If this easy plan be followed twice a day for a few weeks, an astonishing change may be effected, the unnatural form of

chest giving place to one of symmetry. At the same time, the muscles of the chest are to be brought into action in a special manner by varied movements of the arms and trunk. The cross-bar swing is also a valuable measure for increasing the capacity of the chest, and is fully described in the author's work "On Consumption." The so-called chest-expanders are unnecessary and useless. The whole chest should be sponged with cold water every morning, and thoroughly dried by means of a towel. In cold weather the sponging should be rapidly performed.

PART VI.

SOME HINTS ON THE REGULATION OF DIET WITH A DIETARY FOR INVALIDS.

CHAPTER I.

The subject of food is one of deep and constant concern both to the healthy and the sick; not merely for the gratification of the taste, or even the satisfaction of the appetite, but also for the maintenance of life. In health, diet may be left very much to the inclination or taste of the individual, both with respect to quality and quantity; for unless the appetite be perverted and depraved by rich sauces and high seasonings, it is on the whole the best guide. Still, judgment must be exercised, otherwise in respect to eating and drinking man will degenerate into a mere animal. In disease, on the other hand, the appetite fails to guide, and intelligence and judgment are more required for the selection and rejection of the different articles of diet; much more so, because the regulation of both quantity and quality acquires greater importance than when a person is in health. The taste of an invalid is so perverted that he may reject what is most suitable, and desire what would frequently prove injurious; and his appetite is so precarious that it is not to be trusted to regulate the appropriate quantity. Hence the severity of the disease might

be increased, and the life of the patient imperilled, if taste and appetite guided in the selection and taking of food, instead of intelligent knowledge of the properties of different foods, and judicious experience in their administration.

The digestibility of food and its subsequent assimilation depend, as we know, as much upon the mode of its preparation as upon the condition of the person who eats it. If this be true of the "healthy," it is more intensely true of the "sick." Not unfrequently a change in the method in which food is cooked, is the simple means whereby it may be rendered acceptable, and easily digested by the individual, who previously suffered from taking it. Such change may make all the difference for the relief of some functional disorder of the alimentary canal.

In chronic diseases of the digestive organs, in which the appetite may be unimpaired or even inordinately increased, attention to some dietetic regulation is of great importance, for in such cases there is considerable danger lest the boundaries of prudence should be overstepped in yielding to the urgent claims of appetite in taking excessive or unsuitable food.

It is almost impossible to lay down rules for the rational and methodical use of food in health and disease, for in this, as in other matters, cases must be individualized.

Sex, age, employment, condition of life, physical form, idiosyncrasies, circumstances—all are elements in the solution of the problem, "what to eat and what to avoid."

No precise rules can be laid down. General principles alone can be enunciated; known scientific facts can be promulgated; well-tried common experience can be recorded; then out of the materials thus supplied the most fitting for each case must be selected with intelligence and judgment.

There is a neglect, and even a positive violation, of instructions against which we must here enter our emphatic protest. A physician prescribes certain food just as he prescribes certain medicines. But while the medicine may be honestly given, the food is withheld or other food is substituted. The patient and the friends of the patient often deceive the physician with reference to diet, and deem the original transgression and the subsequent deception, quite venial offences which it is unnecessary to confess. The

consequence is that the patient's recovery is retarded, and the medical man's treatment is reproached.

The impossibility of prescribing fixed regulations for diet will also be evident from a consideration of the circumstance that some persons can take what others are obliged to reject. In fact, there is truth in the saying, "What is one man's meat is another man's poison." So that no dietetic rules can be laid down to suit all cases either in health or in sickness.

CHAPTER II.

Relation of Food to Nutriment.

Food has been defined as a substance which, when introduced into the body, supplies material which renews some structure or maintains some vital process. Medicine modifies some vital action, but does not supply the material which sustains such action. A supply of suitable food is therefore essential during the medical treatment of disease; for medicine alone will not, and is not designed to sustain life. Neither, on the other hand, will changes of food so modify vital action when it is disordered as to render the administration of medicine superfluous. Nevertheless, it must be allowed that diet does play an important part in promoting recovery from disease, and that some kind of food does stimulate vital action in a degree far beyond the actual amount of nutritive material they supply. Food is required by the body for two chief purposes, viz:—to produce and maintain the various tissues while they are fulfilling their divers vital functions, and to generate heat, without which life would cease. That the maintenance of the tissues is of great importance is evident from the decay of life which is invariably associated with the wasting of the tissues. That the generation of heat is essential is evident from the fact that while waste of tissues may go on for a long period before death occurs, the removal or lessening of heat is soon followed by the termination of life. When the body is in a state of disease, we have, therefore, to meet these two prin-

cipal requirements, the maintenance of tissue and the maintenance of heat. Now, in accordance with these requirements, there are foods which are assimilated by particular tissues, and go to maintain them, called in general terms "flesh-formers;" others sustain the vital heat and are known as "heat-formers;" others again both nourish tissue and supply heat. Food is derived from all natural sources—from earth, water and air; from solids, liquids and gases; from substances living and organic, or inanimate and inorganic. The food thus variously derived is converted by the action of vital forces into those compounds which the body can assimilate and change into a part of itself. But before it can be so assimilated in the human body, the greater part of it must become organic. Chemical elements uncombined are of no service as food. They must be built up into some living organism to be of service. Hence our food generally consists of animal and vegetable products, the animal having been also previously derived from the vegetable. Indeed, all our foods are primarily derived from the vegetable kingdom; for no animal has the physiological power of combining mineral elements so as to form them into food. But the vegetable assimilates inorganic materials under the influence of light, storing up in itself various elements in different combinations essential to the formation and nutriment of vegetable and animal structures. So, without taking much inorganic matter directly into the system, we obtain what is necessary through its presence in the organic.

All food, whether liquid or solid, may be classified as organic and inorganic. In view of their chemical composition organic foods are generally classified as nitrogenous and non-nitrogenous. Among nitrogenous foods, the flesh or muscular tissue of animals contains the elements which are required for forming flesh and generating heat. Hence life could be maintained for a considerable time on animal food alone. Bread, among vegetable foods, contains nearly all the elements required for nutrition. Nitrogenous foods must all undergo the process of digestion before they can be assimilated and form part of the body. This process is really one of comminution and liquefaction. The food is reduced to a finely divided state by the action of the teeth, the muscles of the mouth, and the saliva; when it reaches the stomach

it is further disintegrated by the action of the gastric juice with which it is brought into contact by the motion of this organ. Hence it passes out in a state of fluidity, as a very soluble and diffusible product called *chyme*, and easily transmitted to the blood-vessels. Should any portion of the food pass from the stomach undissolved, it is subjected to a supplementary digestive process in the bowel. The intestinal fluid and the pancreatic juice act as solvents; and the bile is incorporated with the food, which is now in a condition ready for absorption.

The primary use of nitrogenous food is to develop and renew the various tissues; its secondary use is to facilitate the absorption of non-nitrogenous food. Wherever there is life, nitrogenous food must be present to sustain it; non-nitrogenous food contributes to its support; without the former the latter would be useless; the former being present, the latter is a very valuable auxiliary. Nitrogenous food is the main tissue-former, but it also to some extent produces force.

Non-nitrogenous food produces force, but it also in some measure contributes to the formation of tissue. Non-nitrogenous food comprises fats, starch and sugar, alcohol and vegetable acids.

Fat holds the highest place as a heat-former, for by its oxidation, heat is generated in the system. Starch cannot be assimilated without change; when raw it passes out of the system unaltered. If it is boiled, the particles are ready for conversion into sugar. This conversion would take place in the mouth under the influence of saliva if the food remained there for a sufficient length of time. But it is usually swallowed at once; and when it reaches the stomach the gastric juice arrests the action of the saliva. It then passes on in a semi-fluid state to the small intestine, where the digestion really takes place. The intestinal secretion and the pancreatic juice act energetically on the starch, and convert the particles into sugar.

Sugar is so easily diffused that it requires no preliminary digestive process to prepare it for assimilation. It passes without change into the circulation. If, however, it is in excess of the requirements of the system, when it reaches the stomach it undergoes lactic acid fermentation, and thus occasions the acidity from which some dyspeptics suffer; when not in excess, the sugar

is carried on to the liver, where it undergoes certain changes which lead us to conclude that it contributes to the production of fat, but not to the production of force.

Alcohol is very rapidly diffused through the system. Some portion is evaporated through the lungs; some is eliminated by the liver and kidneys; and the rest remains for a long time diffused through non-excreting organs when it is transmuted into new compounds. The most recent researches appear to show that alcohol yields no nutriment, but that it acts merely as a stimulant. Alcohol does not produce warmth, nor sustain it. Nor does it give or sustain strength; there is muscular excitement produced at the expense of the tissue, and drawing upon its reserve of force; there is, in fact, nervous stimulus, but muscular enfeeblement. When alcohol is taken in very moderate quantity it increases the activity of the circulation, causing the heart to beat faster and fuller and the arteries and arterioles to dilate, thus producing a flushing of the face; it aids digestion, excites the nervous system, and exhilarates the intellectual and emotional faculties. But the price to be paid for all this may be too high, and the habitual use of even a moderate quantity will lead slowly but surely to degenerative changes. Taken in large quantities, the immediate effect of alcohol is depressing and narcotic. It alters the condition of the blood, causing arrest of chemical changes and alterations in the composition and forms of the corpuscles. Then follows an affection of the spinal cord, involving enfeeblement of nervous stimulus and a corresponding deficiency of control over certain muscles. A tottering gait is an indication of this. The brain centers are then affected, the controlling influence of the will and judgment are lost. This is followed by complete collapse of the nervous functions, the senses becoming all benumbed, and consciousness lost.

The ultimate effect of immoderate drinking is complete degeneration, and this is not confined to the notoriously intemperate or drunkards. Women accustomed to take wine would be shocked at the imputation that they were taking too much, have proved unfortunately that they really have taken to excess. The appetite is impaired, dyspepsia and sleeplessness follow. The heart is enlarged; the liver undergoes structural changes; the kidney is

deteriorated by fatty modifications. The minute vessels of the lungs are relaxed and easily congested, and consumption and bronchitis result. The eyes are injured. Indeed, there is not an organ that is unaffected. The brain and spinal cord and the whole nervous system suffer, giving rise to serious derangements, such as paralysis, epilepsy or insanity. And these derangements, it should be remembered, are more or less transmitted to degenerate offspring.

CHAPTER III.

Comparative Values of Animal Food.

Physiological considerations and experience teach us that a mixed diet is best adapted to the requirements of the body; and that the proportion of animal food should be one-fourth, or rather more, of the total supply.

Animal food comprises (1) the different parts of animals, (2) eggs, (3) milk and its products.

The flesh of young animals is more tender than that of old, but is not so easily digested. The flesh of middle-aged animals is more nutritive, and has a fuller flavor than that of young. The flesh of old animals, though nutritive, is often very tough. The larger the animal, the coarser the meat. The flesh of the female is more finely grained and delicate than that of the male. During the breeding season flesh is unsuitable for food. The flesh of wild animals has less fat than that of well-fed domestic animals, but it has more flavor. The violent exercise taken before death makes the flesh very tender of animals killed in the chase.

Good meat has the following characteristics:—1. It is neither of a pale pink color nor of a deep purple tint.

2. It has a marbled appearance, from the ramifications of little veins of fat among the muscles.

3. It should be firm and elastic to the touch, and should scarcely moisten the fingers—bad meat being wet, and sodden, and flabby, with the fat looking like jelly or wet parchment.

4. It should have little or no odor, and the odor should not be disagreeable.

5. It should not liquefy or become very wet on standing for a day or so.

6. When dried at a temperature of 212 deg. it should not lose more than seventy-five per cent. of its weight.

7. It should not shrink or waste much in cooking.

Salted meat is objectionable, and is unsuitable for invalids. It is deficient in nutritive value and natural flavor. It acts prejudicially on the system, by the introduction of an excessive quantity of salt and saltpetre.

Beef and **Mutton** are the principal fresh meats. The former is richer in flavor, containing more iron, is more satisfying and more strengthening, but makes greater demands upon the digestive powers. In many cases of illness it may be eaten with impunity, but in Enteric fever it produces injurious effects. Even in the form of beef-tea it often increases the irritation, keeps up the fever, and aggravates the diarrhœa. Administered in a raw state, when finely divided and reduced to a pulp, it is very useful in some derangements. It has proved very valuable in Cholera Infantum and Dysentery, when everything else failed.

Mutton or mutton broth is much to be preferred for delicate persons.

Veal and **Lamb** are more gelatinous, less stimulating, less nutritious and less easily digested than beef and mutton and cannot be advised for the sick.

Pork on account of its fatness is not so easy of digestion as other meats. Bacon and ham do not so easily disagree with the stomach, but have no place in the sick-room.

Venison is lean, dark-colored, and savory, and is easily digested by the dyspeptic and convalescent.

Gelatine which forms the basis of soup contains considerable nutritive matter.

Liver of the calf, lamb, or pig, is rich and savory, but is not suitable for those whose digestive powers are feeble.

Sweetbread is easily digested, and when simply cooked is not unsuitable for the convalescent.

Preserved Meat is not so nourishing as the same amount of properly cooked fresh beef.

Extract of Meat may often prove a temporary substitute for beef-tea, but it must not supersede it in the sick-room.

Birds occupy an important place among the sources of food, especially in the diet of the sick-room.

Poultry, such as fowl, turkey, and guinea-fowl, are easily digested, are milder and less stimulating than meat. But they are not very nourishing; they contain too little fat.

Game—pheasant, partridge, grouse, woodcock, snipe and quail, is strengthening, tender, and easily digested. It forms a valuable diet for the sick-room.

Wild-fowl is not adapted for dyspeptics and invalids.

Pigeon may be eaten with safety by the convalescent.

Fish is very valuable as food if eaten as soon as possible after capture. It does not easily satisfy hunger, but is easily digested and is highly nutritious. It is especially adapted to those upon whom there are great demands for nervous energy, and is therefore useful in some cases of nervous exhaustion.

Shell-Fish, with the exception of oysters, are less nutritive than other kinds of fish. In some persons they produce gastric irritation and diarrhœa, and in others nettle-rash and similar eruptions.

Lobster and Crab are not suitable for those whose digestive organs are weak, and consequently should not be introduced into the sick-room.

Prawns and Shrimps belong to the same family and are not suitable for invalids.

Turtle-Soup is a rich food, and, in small quantities at a time, is often very restorative to invalids.

Oysters are nutritious, and readily digested even by delicate stomachs. By invalids they should be taken without the fringe or bread, and without the hard muscle by which the fish is attached to the shell; they should also be eaten raw, and masticated before they are swallowed. To eat them with vinegar is to commit a dietetic mistake. They should only be eaten from September to May.

Fresh oysters are most grateful in chronic dyspepsia, in the case of consumptives, for the trouble of morning sickness, in chronic diarrhœa; they can be eaten with advantage by the

nursing mother. Convalescents from fever will find in the oyster a delicate and nourishing food.

Oyster-Stew, prepared plain or with milk, and served with dry toast or plain biscuits, is excellent.

Eggs, if the shell be included, contain everything necessary for the formation and maintenance of the body. This food does not, however, exist, as in milk, in a state of perfect solution, but in a semi-liquid form; consequently some digestion is necessary before it can be assimilated. Raw and lightly boiled eggs are readily digested. If the white or albumen be coagulated by the heat of cooking it becomes heavy and difficult of digestion. It should be particularly avoided by dyspeptics and by persons recovering from illness. A fresh raw egg, thoroughly stirred into a half-a-pint of milk, forms, to most persons, a palatable and nourishing article of diet.

Eggs seem to be particularly useful in lung diseases, and in cases of exhaustive cough soothe the irritable mucous membrane.

Artificial fibrin, so called, has been found available when no other food could be taken. It is thus prepared:—The white of an egg is poured into cold water and allowed to remain for twelve hours, during which time it undergoes a chemical change, becoming solid and insoluble, assuming an opaque, snow-white appearance. This and the liquid in which it is immersed are heated to the boiling-point, and the fibrin is ready for use. It is very easy to digest, and in many cases the stomach will retain it when everything else is rejected, its presence creating a craving for more food, and thus promoting instead of diminishing digestion.

No egg that is not fresh is good for food, even when put into puddings.

Milk.—Pure milk contains in solution, like eggs, all the elements requisite for the growth and sustenance of the body. Indeed, it may be regarded as the typical alimentary substance, for it combines nitrogenous, fatty, saccharine, and mineral matters, and water in such proportions as are required by the animal economy, and in such a state of mixture and liquefaction as to be easily assimilated. In fact it requires no digestion, and it is this excellence which renders milk a most important and convenient

article under many circumstances. In cases of fever, pure milk as the main article of diet is far superior to anything else, especially in Enteric and other fevers inducing disturbance of the stomach and bowels. Beef-tea, which is commonly used, is often irritating; but milk, on the contrary, is soothing, cooling, and at the same time nourishing and strengthening. It allows the stomach to have almost absolute rest, which in many cases is all that is required. It should, however, be observed that milk would not be suitable diet for adults in health, as the nitrogenous matter is in considerable excess in relation to the carbonaceous. It is suited to young persons who have to grow, and who in order to grow must appropriate an excess of what is nitrogenous to form a daily addition to the body. On the other hand, it is not so suitable for full-grown persons, who have not so much to form tissue as to develop heat or other force by the combustion of carbon. The constituents of milk vary in quantity and proportion in different animals, and under different circumstances in the same animal. Woman's milk is of course the standard. The milk of the Alderney cow is characterized by its richness in butter, that of the long-horns by its richness in caseine. The product of young cows is preferable to that of old ones, and as a food for infants the age of the secretion should be less than that of the baby; that is to say, a cow with a calf two months old may do very well to feed a child of four months. The milk first drawn from the cow contains less cream than that which is last drawn. The milk of the afternoon is richer both in caseine and butter than that of the morning.

The quality of milk may be tested by the amount of cream it produces, by its weight, and by its specific gravity. A quart of new milk, cooled, should weigh about 2 lb. $2\frac{1}{4}$ oz. The specific gravity of good milk ranges from 1·026 to 1·030 at a temperature of 60 deg. The addition of water or an excess of cream lowers the specific gravity.

On stale milk there is a small blue fungus, or mould, that forms speedily and soon spreads to fresh milk if the vessels have not been cleansed by thorough washing with soda.

Fifteen grains of bicarbonate of soda to a quart of milk prevents it from turning sour, and also renders it more digestible.

Milk, though nourishing, does not agree with every one. If diluted with one-third lime-water, it will rarely cause biliousness or indigestion.

Butter-Milk is what is left after the extraction of butter. It of course contains less fatty matter than skim-milk, but it retains the nitrogenous, saccharine, and saline matter, and is therefore very nourishing and useful as an article of diet. It is one of the most refreshing summer drinks that can be taken, and is almost always allowable in sickness, especially in fevers with gastric symptoms. It appears to produce a gentle activity of the liver and kidneys.

Curds are the caseine and fat of milk combined by coagulation.

Whey is the residuary liquid after the curd has been removed, containing a little of the caseine and fat, but all the sugar and salts of milk. It is not very valuable as nutriment, but it is very digestible, is easily absorbed, and is a refreshing drink in the sick-room. There is a prevailing opinion that whey is sudorific; hence wine-whey, alum-whey, etc., when the milk has been curdled by these substances, are recommended.

Condensed Milk is milk preserved by the evaporation of a large proportion of its water and the addition of cane sugar. Infants thrive well upon it.

Koumiss, which is fermented mare's or cow's milk, has been found very useful in some cases of consumption.

Butter is the fatty portion of milk obtained by churning; when pure and fresh, butter is more easily assimilated by delicate stomachs than most other fats.

Cheese is the nitrogenous portion of milk with a proportion of fatty matter, obtained by coagulation into curd by means of rennet. It stands very high in the scale of nutritious food; one pound being equivalent to three and a-half pounds of lean beef. Taken with bread or other vegetable diet it is very nutritive to persons of active habits. But it is not suitable for persons of sedentary habits, or for invalids, especially at bedtime.

CHAPTER IV.

Vegetable Food.

Vegetable products enter largely into the food of man. Farinaceous seeds form the largest portion of our vegetable food, and are of great nutritive value.

Cereals hold the first place. The general composition of all is very similar, but on account of the differences that exist in the proportions of their component elements, they have different nutritive values. On an average, wheat contains more nitrogenous matter than other grains. Oats come nearest to wheat in this respect.

Corn is rich in fatty matter, moderately so in nitrogenous, but poor in salts.

Rice is very rich in starch, but poor in other constituents.

Wheat corresponds more nearly to the requirements of the human system under ordinary circumstances than any other grain. As it is ordinarily used, however, it is deprived of much of its nutritive value, for the portion which contains the largest amount of nitrogenous matter is removed in order to meet the demand for whiteness in the bread. Each grain, after being threshed out of the straw and winnowed from the husks, is composed of a hard, thin outer coat, or bran, a soft, friable intermediate layer of cells, and a central white substance chiefly composed of starch. The outer coat is woody, indigestible, useless for nutrition, and irritating to the alimentary canal. For invalids and persons whose digestive organs are in a state of susceptibility, it is too irritating. The inner coat is of most value. It is usually removed with the outer coat in dressing flour. But it is the richest part of the grain, the part which contains food for muscles, bones and brains; and the more thoroughly this is removed, the finer the flour is dressed, the whiter the bread produced, the less valuable is the bread for nutrition. The central white material of the grain is

chiefly composed of starch, but it comprises also a proportion of the more nourishing elements. Many writers have pointed out the unwisdom of preferring white bread to that which contains the nitrogenous portion. Certainly to most persons the white bread is more palatable, and presents a more pleasing appearance. It would be better to sacrifice the appearance and cultivate another taste, if thereby more nutriment could be obtained. Young and growing children are great but unconscious sufferers from the common custom. Many are weak from mal-nutrition, grow up with defective teeth and bones, weak tissues, inadequate muscular development, and are susceptible to diseases which they have not constitutional strength to combat and resist.

Bread Made with Sea Water is said to increase the appetite and stimulate digestion.

Stale Bread is preferable to new; it is more friable under the action of the teeth and more easily penetrated by the digestive juices than new bread. It is generally the most digestible one or two days after it has been baked.

Aerated Bread, made by forcing pure carbonic acid into the dough, keeps better than other kinds, is free from yeast, does not induce fermentative changes in the stomach, which cause dyspepsia, flatulence, and heartburn.

As bread made of white flour is poor in fats and salts, the common practice of eating butter or other fat with it is, therefore, more than the gratification of a taste, it is a physiological necessity.

Toasting Bread greatly increases its digestibility, provided the process be properly carried out. To cut the slices so thick that while the sides are rendered crisp, the interior becomes spongy, and then to soak the whole with butter, is to render toast very indigestible. The slice should be toasted brown, not burnt, so that it may be crisp and firm throughout. It then constitutes the best form in which starchy food can be given; for much of the starch is changed into glucose by the heat. The butter should be applied as the toast is eaten, so that it may not become soaked with the butter.

Toast Water, when properly prepared, forms an almost indispensable article in the sick room.

Biscuit Powder, made from ship biscuits which consist of flour and water only, and prepared with milk, can be sometimes taken by invalids who cannot bear solid food.

Cracknells are light, and easily digested.

Sponge Cakes are also light, and often tempting. They may be soaked in hot milk.

Macaroni and Vermicilli are very nutritious but not easily digested on account of the closeness of their texture.

Oats, when ground, form a very nutritious food. When deprived of their covering oats are known as *groats* or *grits;* groats and milk furnish perfect nourishment, even for an adult.

Porridge is a hasty pudding of boiled oatmeal. Oatmeal in all its forms is somewhat laxative, and often causes irritation of the bowels, especially if not sufficiently cooked. There are some persons who cannot take it on account of the acidity and eructation which it causes.

Barley is not so much employed as it used to be in the form of bread. The best way to use barley flour is in the form of gruel. The nutritive value of barley is somewhat inferior to wheat.

Malt is barley changed in process of manufacture, so that a peculiar active nitrogenous principle called *diastase*, is developed, which has the power of converting starch into dextrine and sugar.

An Infusion of Malt is made by boiling four tablespoonfuls of ground malt in a pint of water for ten minutes. The liquid is drained off, diluted one-half with milk or given pure. It is very agreeable and nutritious, and is often beneficial in some cases of Cholera Infantum, when other things are rejected.

Rye is more like wheat than other cereals in its fitness for making bread; but it is not so nutritious as wheaten bread, while its color and acidity render it distasteful to some. It possesses laxative properties.

Indian Corn, or Maize, is not adapted for the manufacture of bread on account of its deficiency in gluten, unless wheat or rye flour be mixed with it. The large proportion of fatty matter, nevertheless, renders it very nutritious.

Rice is said to be the food of nearly one-third of the human race. It is useful as an article of diet whether whole or ground. It should be thoroughly cooked. In India, rice is never prepared

alone, but always with the addition of a certain pulse which abounds in albuminates. Rice boiled or baked with milk and eggs as pudding forms a substantial meal.

Rice-water is very useful as a drink in all irritable states of the alimentary tract, as in Dysentery and Diarrhœa.

Of the various *farinaceous preparations* adapted to the digestive powers of infants, dyspeptics, and invalids generally, Neave's, Ridge's, and Hard's take the lead, and each of these has its recommendations. We give the preference to Neave's so long as it is obtained fresh and in good condition.

Passing now to the *products of the kitchen garden*, classified according to the chief purposes they subserve in the animal economy, and its average value.

Starchy and Sugary Plants.—Potatoes, yams, chestnuts, beans, lentils, peas, artichokes, carrots, parsnips, beets, salsify, turnips. Each of these is a force-giver, but each may be unsuitable for food in some disordered conditions.

Stimulants.—Asparagus, onions, garlic, aromatic herbs, mustard, cress, and a few other pungent salad materials. These cause increased secretion of saliva and gastric juice, and thus promote the digestion of a larger quantity of food than could otherwise be dissolved.

Anti-Scorbutics.—Cabbages, tomatoes, and salad materials in general. These products contribute valuable saline materials to the blood; but they should be quite fresh or they will cause indigestion.

Diluents.—Cabbages, spinach, wintergreens, cauliflower, sorrel, or any leaves sufficiently palatable to eat and soft to swallow, and which are green when boiled. The chief uses of these is to render other food more thoroughly open to the action of the digestive secretions. Though not apparently nutritious in themselves they make other things nutritious.

Potatoes are an agreeable and wholesome article of food, easily cultivated, easily cooked, but not always easily digested. The proportion of starchy constituents is large, and of nitrogenous elements small, so that it is desirable to eat with them some other food, such as meat, fish, bacon, buttermilk, etc., in order that a fully nutritious diet may be supplied.

Preparation for the Table.—The best method of cooking potatoes is by steaming them in the skin; by this process heat penetrates everywhere, and there is no loss of material and salts. If the potatoes are boiled the skins should not be previously removed, or a large amount of salts will pass out. The addition of common table salt to the water is advantageous, for it helps to retain the natural salts.

Roasted potatoes are more nutritious than boiled. Potatoes are spoiled by germination and by frost.

Carrots make a pleasant change in one's vegetable fare, but are apt in some cases to produce flatulence.

The **Parsnip** possesses the same general character as the carrot.

The **Turnip** contains a very large proportion of water, and hence is of little nutritive value, and is more difficult of digestion than carrots or parsnips.

Radishes are somewhat like the turnip, but being usually eaten raw, are often indigestible.

We now turn to another class of vegetables. The leaves, shoots, and stems of some plants are valuable for food, chiefly on account of the salts they contain, and because they give variety to the diet. Green vegetables are always more or less relaxing, and possess a high anti-scorbutic value. In all cases they should be eaten as fresh as possible, otherwise they will ferment in the stomach, and cause flatulence.

Cabbages, Savoys, Sprouts, Cauliflower, Etc., are of the same general character; they contain but little nutrition and are not easy of digestion, and therefore not suitable for dyspeptics, while the large proportion of sulphur they contain causes disagreeable flatulence of carbonic acid and sulphuretted hydrogen. Cabbage, however, is a most valuable anti-scorbutic, but if fermentation has begun its virtue is destroyed.

Spinach is wholesome, and somewhat laxative.

Rhubarb is eaten as a fruit rather than as a vegetable, and requires to be well sweetened to make it palatable. As it contains oxalate of lime, it should be avoided by those who are subject to Calculus.

Celery is sweet and mild when well cultivated, [and is thought by some to act as a sedative, quieting the nerves]. Used in soups it is delicious and wholesome.

Asparagus should be eaten as soon as possible after being cut. The greenest heads are to be preferred as they contain the largest amount of the peculiar principles of the plant. There need be no fear that they will prove injurious to the kidneys. Slight cases of Rheumatism have been cured by eating freely of this plant; and chronic cases of rheumatic gout and gravel much relieved.

Onions are very wholesome vegetables, whether eaten raw, stewed or roasted; they are too strong, however, for invalids when they have not been cooked, and some cannot eat them raw or cooked.

Lettuce is agreeable, cooling and digestible as a salad; the juice is mildly soporific.

Cucumbers eaten raw and quite fresh at the beginning of a light meal may be indulged in by some with impunity; but they are indigestible and apt to disagree with many persons.

Squashes and **Pumpkins** contain much water but little nutriment; they are easily digested.

Mushrooms, which are generally eaten after being stewed, sometimes disagree with dyspeptics and had best be avoided, for sometimes they cause colic, vomiting and purging. Those mushrooms grown in open pastures are by far the best. It is not always easy to distinguish mushrooms from poisonous fungi, so that some caution is desirable in gathering them and preparing them for food.

A meadow mushroom should peel easily, and it should be of a clean pink color inside, like a baby's hand, and have a frill attached to the stalk. When the gills are brown they are growing old and dry and losing their nutritive qualities.

Vegetable Broths, made of any of the ordinary market vegetables in season by boiling and straining, are useful as substitutes for animal foods when the latter are not allowed. Out of season dried vegetables may sometimes answer the purpose. In preparation of these, non-metallic surfaces only should be allowed to come in contact with the materials employed.

Fruits are agreeable and refreshing, but as their proportion of water is high, and of nitrogenous matter low, they are of little nutritive value. When taken in moderation they are very wholesome. It is best eaten in the morning. When consumed in large

quantities, fruit is injurious, particularly if it be unripe or over-ripe, —in the former case by the action of the fruit-acids, in the latter by fermentation and decomposition. The seeds of all fruit and vegetables, if swallowed, prove more or less irritating to the intestines, and in inflamed or ulcerated conditions may do irreparable mischief.

Apples when raw are not easily digested; when cooked, are light, digestible and wholesome. Roasted apples are somewhat laxative, and may be eaten to counteract constipation.

Pears when ripe are more digestible than apples, but as they decay sooner, they are more likely to produce derangement of the bowels.

The **Orange** is one of the most agreeable and useful fruits for the sick-room. It is less likely to cause disorder than most other fruits.

The **Lemon** is too acid to be eaten alone. The juice is beneficial in rheumatic affections; but in the form of lemonade it makes a cooling and refreshing drink. Lemon-juice is very valuable as an anti-scorbutic; so also is lime-juice.

Plums are less wholesome than most other fruits; when cooked there is less objection to them.

Cherries also, when unripe or over-ripe, disorder the bowels.

Peaches, Nectarines and Apricots are luscious fruits, when quite ripe, yielding a delicious pulp for the refreshment of the invalid; the skin should be rejected.

Grapes are most refreshing, wholesome and nutritious in the sick-room when ripe and not decayed; the skins and pips should be rejected.

Raisins, which are dried grapes, contain more sugar and less acid than ripe grapes; they are consequently more nutritious. If eaten too freely, especially if the skins or pips be swallowed, they are apt to disorder the stomach.

Gooseberries and **Currants** (red, black and white) are wholesome, cooling, useful fruits; but together with Raspberries are generally interdicted in acute diseases.

The **Cranberry, Barberry, Bilberry,** and **Elderberry** are too acid to be eaten raw; the first three are made into preserves, the last into wine.

The Strawberry is one of the most delicate, luscious, and refreshing of summer fruits, and may as a rule be taken by invalids, except when Diarrhœa is present.

The Raspberry, too, is agreeable and wholesome. So also is the Blackberry when in fine condition. The Mulberry is more acid, and very grateful to fever patients; but the juice only should be taken.

The Melon is a rich, delicious fruit, but not unfrequently disagrees with those whose digestive powers are weak. The Pineapple should not be eaten by invalids; the pulp should be rejected if the juice be taken.

The Fig is sweet and nourishing; its pulp may be eaten by invalids, but if eaten too freely will irritate and disorder the bowels; the skin is rather indigestible.

Tamarinds are cooling and laxative; and when mixed with milk to produce tamarind whey, form an agreeable drink for febrile cases.

Of Olives the so-called Spanish are the best, being soft, pulpy, and oily. Olive Oil is regarded the most digestible of fatty foods, even more so than fresh butter; it should, however, be thoroughly good, pale, clear and free from rancid smell, to justify this estimate. Lucca oil with its nutty odor is the best.

Gum is the solidified juice which exudes through the bark of trees. Gum arabic, which flows from the acacia in Arabia, Egypt, etc., is what is usually employed in the preparation of drinks.

Seaweeds are among the most nutritious of vegetable products; in fact they are richer in nitrogenous matter than oatmeal or Indian corn. It is much to be regretted that they are so much neglected.

Sugar is an important alimentary product, chiefly found in the vegetable kingdom. It also exists in the animal economy, and is there known as the sugar-of-milk. The vegetable sugar exists in two varieties—cane sugar and grape sugar. Grape sugar, or glucose, is inferior in sweetness and crystallizing power, and abounds in grapes and other fruits and vegetables. It may be obtained by chemical change from cane sugar, starch, gum, corn, etc. Sugar is valuable from a dietetic point of view, not only as rendering more palatable many articles of food, but also

as productive of fat and force. As it is readily dissolved and diffused, it requires no preliminary digestion in order that it may be absorbed through the mucous membranes. In ordinary cases it does not, therefore, occasion any gastric derangement; but when taken in excess, or by some dyspeptics, it is liable to undergo acid fermentation, and occasion acidity and flatulence. Sugar-of-milk does not undergo this change.

Treacle and Molasses are the respective uncrystallized residue drained from refined and raw sugar.

Golden Syrup is treacle purified by being re-boiled, and filtered through animal charcoal. If largely taken these products are laxative. They are appropriately taken with all kinds of farinaceous foods, such as puddings and porridge, etc.

Honey is a concentrated sugar mixed with odorous, coloring, gummy and waxy matters, gathered from flowers by the bee for its own consumption, but undergoing some modification by the secretions of the insect. It is of the same dietetic value as sugar.

Manna is a solidified juice of some species of ash, containing a peculiar saccharine principle—sweet, odorless, crystallizable, white—but differing from sugar in that it does not undergo alcoholic fermentation when brought into contact with yeast. It is chiefly used as a mild and safe laxative, but it is also nutritive.

Such condiments as vinegar, salt, and pepper are of real dietetic value, as they make the food more tempting to the palate, stimulate a flagging appetite, assist digestion by promoting the flow of secretions and the movements of the alimentary canal, and counteract the action of injurious ingredients of food. Excessive use of them, however, promotes indigestion, and they are of less value in the sick-room, salt excepted. The constant presence of this mineral in the secretions, and the necessity for it in due proportions in the blood, indicate the importance of a proper supply with the food. This is evident in the instinctive desire of animals, and in our own craving for it when it is not supplied in sufficient quantity.

Vinegar is useful in helping the stomach to digest both animal and vegetable food, particularly if the fibre is somewhat hard and difficult to break up. It is, therefore, the fitting accessory to such animal food as invalids should banish from their table, but it can

be made use of by those of weak digestion, when they wish to vary their diet with a cool salad.

Both cayenne and black pepper, by stimulating the flow of gastric juice, are valuable aids to digestion, when used with discretion.

CHAPTER V.

Liquids.

Water.—There is no beverage so wholesome, or, to the unperverted taste, so agreeable, as pure water, the natural drink of man, which may always be taken in moderation when thirst is present. In some form or other it is essential to life. Water is requisite in many functions of the animal economy; for example it favors digestion by promoting the solution of our food, and acts as a vechicle to convey the more dense and less fluid substances from the stomach to their destinations in the body. It gives fluidity to the blood, holding in suspension, or solution, the red globules, fibrin, albumen, and all the various substances which enter into the different structures; for the whole body is formed from the blood. Water enters into the composition of the tissues of the body, lubricates those tissues, and forms a necessary part of our bodily structure. It equalizes the temperature of the body by evaporation, and regulates the chemical changes resulting from nutrition and delay. It is the vehicle for the removal of effete products from the body; increased water-drinking causes increased flow of urine, and thereby facilitates the excretion of solid particles. In this way some of the impurities which cause gout, gravel, etc., may be eliminated.

It has been supposed that water should not be taken with meals; but this is an error. An excessive quantity might prove prejudicial. Water is the same substance from whatever source derived. When allusion is made to differences between waters, it is really to various bodies mingled with the water. Thus a water analysis really means an analysis of the foreign bodies held in suspension by the water. Water is sometimes hard and some-

times soft, according to the appearance or non-appearance of soap-bubbles when washing. Generally speaking, the difference depends upon the carbonate of lime held in solution; until this is exhausted soap-bubbles or lather cannot be produced. Hardness is due to the presence of magenesia as well as lime. Carbonate of lime in small proportion in drinking water is not injurious to most persons. Indeed, there is evidence to show that it is assimilated, and aids in the formation of the phosphate of lime in bones; it is therefore useful for rickety children.

Water now and then contains some metal, such as iron, lead, and copper. It ought not to be drunk if there be more than one-tenth of a grain of iron or copper in a gallon of water. A very minute proportion of lead is injurious.

Rain-water is soft, and naturally contains the least amount of solid impurity, but unless carefully collected and kept covered, is likely to become impure.

Spring-water is rain-water which has percolated through the earth, and acquired saline elements from the soil through which it has passed. Chalybeate and other mineral waters are thus charged, and should be taken only when prescribed as therapeutic agents.

Well-water is collected spring water. If the well be deep, and there be no leakage into it from some higher layer of soil, or from some neighboring decaying animal or vegetable matters, it usually affords a safe and wholesome drink. Some of the purest water is obtained from deep wells bored through the earth and clay to the chalk. Superficial well-water, however clear, bright, and tasteless, should be regarded with suspicion, for it is frequently saturated with leakage from privies, drains, or cesspools, often covered up and unknown.

River-water is partly rain-water and partly spring-water, subject to impurity from the soil, and from decaying vegetable and animal matters, and therefore useful only to a limited extent. The flow of the stream and the absorbing influence of vegetation tend to purify the water by oxidation.

Distilled-water is pure, but insipid from its lack of air; its softness makes it easily susceptible to the action of lead; but it is excellent for making tea or other infusions.

Water may be impure from an excess of saline ingredients, from the presence of organic impurities, or from contamination with lead. The chief danger to health is from organic impurity. Cholera and Enteric fever have been traced to drinking impure water. Lead contaminates pure water; but if there be a moderate quantity of earthy salts in the water they form an insoluble incrustation in the pipes which is protective.

It is most important that the receptacles for water—tanks and cisterns—should be carefully examined and thoroughly cleansed at regular seasons, especially after a time of drought and before the approach of winter. The deleterious consequences that ensue from neglect of this duty are often alarming, although the source of the evil be unsuspected. Boiling water removes some of the salts from hard-water, and destroys the activity of any organic impurities. Filtration through charcoal, also purifies the water by removing organic matters; but a filter, to be effective, must be frequently cleansed.

Water may be administered to patients at any temperature that may be desired, but if very cold the quantity should be very small, for in some diseases it is undesirable to lower the temperature of the internal organs. If the stomach is in such an irritable state that no liquid can be tolerated, the thirst may be partially allayed by sucking small pieces of ice.

Ice is a valuable therapeutic agent, and is now extensively used both internally and externally, chiefly to check hemorrhage, to moderate inflammation, and to soothe uneasy sensations in febrile and other disorders. In inflammation of the brain or its membranes, and in the severe headache of the early stages of acute fevers, it is most useful, applied in small pieces, enclosed in a bladder or india-rubber bag, in the form of a cap fitted to the head.

To relieve the severe pain and vomiting in cases of ulcer or cancer of the stomach, a bag containing small fragments of ice should be laid on the epigastrium. In inflammation of the tonsils, the sore throat of scarlatina and other eruptive fevers, and in diphtheria, the use of ice relieves pain and arrests inflammation.

In hemorrhage, ice is extremely valuable. In bleeding from the mouth, throat or nostrils, ice applied directly to the bleeding vessels or to the surface, forms an efficient styptic. When hemor-

rhage comes from the stomach or lungs, ice should be repeatedly swallowed in small pieces, for so taken it will help to contract the leaking bloodvessels.

The drinking of iced water after violent exercise is too lowering to the system, and should be avoided.

Ice is contra-indicated in conditions such as the following: Old age, especially in feeble patients; apoplexy and coma in persons with a feeble pulse; advanced stages of disease; extreme feebleness. In such cases the great sedative power of ice might overwhelm the patient and stop the action of the enfeebled heart.

Tea is a very favorite beverage, but it affords no direct nutriment; the sugar and cream taken with it yields the nutritious elements. But though yielding no absolute aliment, tea, when taken in moderation, exhilarates, restores nervous energy, conserves force, retards the waste of tissues, enabling the food to go further in its nutritive action, and facilitates the transformation of other, and particularly of fatty and farinaceous matters; the body is revived, the mind is stimulated, wakefulness is promoted, and hunger is better borne. When consumed in large quantities, tea acts prejudicially on the nervous system.

Green tea, even when genuine, is stronger than black, possesses more active properties, and is therefore to be used with more caution. Both kinds, when adulterated, are more or less injurious.

Tea, then, is hurtful,—1. To those of spare habit and the underfed. 2. To the young, who are provided with the full amount of vital activity. 3. To those who perspire freely. 4. Early in the day, for it is then apt to increase tissue waste. 5. To nervous, hysterical subjects, or to those whose heart action is very weak.

On the other hand, it is beneficial,—1. For the overfed and sedentary, for they require increased vital action. 2. For the old, whose vital activity is deficient. 3. For those who have a non-perspiring skin. 4. During the after part of the day, when the system is full of partly digested food, for then the process of digestion requires to be quickened. 5. During excessive heat, in order to relax the skin and relieve internal congestion. 6. For those whose nervous systems are firmly braced up.

When tea causes loss of appetite, palpitation of the heart, mental excitement, or sleeplessness, obviously its use should be relinquished. Tea should never be given to children.

Coffee contains the same principle as tea, and hence has an analogous influence on the system. It is, however, more heating and stimulating, heavier and more oppressive to the digestive organs, and decidedly increases the force and frequency of the pulse. Its effect upon the mental faculties, quickening the energies and causing wakefulness, is not so marked as in the use of tea. It, however, relieves hunger and fatigue, and thus enables soldiers on heavy marches to undergo arduous exertion. It appears to have a staying power, lessening the amount of waste, and thus economizing other food. It is laxative to some and constipating to others, and is serviceable in warming the body in cold weather. It is also cooling in warm weather by stimulating the action of the skin. If taken in excess it produces feverishness, palpitation, anxiety, deranged vision, headache, wakefulness and nervous excitement. When given strong, counteracts the effect of alcohol and of opium.

Chicory yields a drink closely allied in flavor and color to coffee. It contains no alkaloid, and has no nutritive value.

Cocoa is distinguished from tea and coffee by the large amount of nutriment it contains; indeed it may be regarded as a food rather than as a refreshing beverage.

The essential principle—theo-bromine, also contains more nitrogen than theine and coffeine. The fat known as cocoa butter, has this excellence, that it does not become rancid after exposure to air. But the large proportion in which this exists renders cocoa heavy and oppressive to a weak stomach, and thus unsuitable to the dyspeptic or bilious. Its very high nutritive power, however, strongly recommends it for general use. During nursing it is most useful, tending, probably more than any other beverage, to maintain an excellent supply of mother's milk.

CHAPTER VI.

RECIPES FOR THE PREPARATION OF FOOD FOR INVALIDS.

Recipe 1.

RASPBERRRY SYRUP.

Put 6 pounds of raspberries into a china or glass bowl, with a quart of water in which has been dissolved 2½ ounces of citric (or tartaric) acid, and let it remain 24 hours; then strain it, taking care not to bruise the fruit. To each pint of clear liquor add 1½ pounds of loaf sugar, and stir it till dissolved. Leave it for a few days and then bottle securely.

A little of this syrup in water forms a refreshing drink for fever-patients.

Recipe 2.

STRAWBERRY SYRUP

may be made according to the same rule, using two ounces of citric acid.

Recipe 3.

RASPBERRY VINEGAR.

Put a pint and a half of the best wine-vinegar to three pounds of raspberries, in a glass or porcelain vessel; let this stand for two weeks. then strain without pressure. Put into bottles, well corked.

Recipe 4.

RASPBERRY VINEGAR.

Mash the raspberries in a crock, cover well with pure cider vinegar. Let this stand for twenty-four hours, giving it an occasional stirring.

Now add one-half the quantity of water that you have vinegar, and to this mixture add three pounds of white sugar to each quart.

Now stir over a gentle fire until the sugar is dissolved. Bring slowly to the boiling point, skimming meanwhile, and as soon as it boils, strain again. Bottle immediately and seal the corks well.

A tablespoonful or more to a glass of ice-water makes a very refreshing drink in sickness.

Recipe 5.—Jelly Water.

Jelly, - - - - one tablespoonful;
Ice-water, - - - one goblet.

Any jelly may be used, currant-jelly, cranberry-jelly, or other kind. Very tart jellies are the best. Stir up the jelly in the ice-water until the two are well mixed.

Recipe 6.—Apple Water.

One large, juicy apple;
Three cups cold water.

Let the apple be a juicy, finely flavored one. Pare and quarter it. Put on the fire in a closely-covered sauce-pan, with the water, and boil until the apple stews to pieces. Strain the liquor as soon as it is taken from the fire, pressing the apple hard in the cloth. Set away to cool. Sweeten to taste with white sugar. Drink ice-cold.

This is a very refreshing and palatable drink, and forms an agreeable change from the more common ones.

Recipe 7.—Lemon Whey.

Put a quart of new milk into a sauce-pan and stir it over the fire until it is nearly boiling; then add the juice of one lemon and let it simmer for fifteen minutes, skimming off the curd as it rises. Add the juice of another lemon, skim for a few minutes, strain, and it is ready for use.

Recipe 8.—Wine Whey.

Fresh milk, - - one pint;
Sour wine, - - - one wineglassful;
Sugar, - - one teaspoonful.

Put the milk into a shallow sauce-pan and bring it to the boiling point. Pour in half the wine, stir gently and let it simmer, and skim off the curd which rises. After a few minutes pour in the rest of the wine, skim the remaining curd, sweeten, and when cold it is ready for use.

Good in fevers.

Recipe 9.—Whey Powder.

Sugar-of-milk,	two ounces;
Powdered white sugar,	eight ounces;
Gum Arabic, powdered,	one ounce.

Mix. Dissolve half an ounce of this in a pint of water. This makes a demulcent drink for use in bronchitis, pleurisy or pneumonia.

Recipe 10.—To Whiten Whey.

Beat up the white of an egg with a portion of the whey, mix with the rest, boil for a moment and run it through a jelly-bag.

Recipe 11.—Mint Water.

Boiling water,	half a pint;
Green spearmint leaves,	a handful.

Bruise the leaves, put into a dish, cover with boiling water; steep fifteen minutes. Drink hot or cold.

Good in nausea.

Recipe 12.—Tamarind Water.

Tamarinds,	one tablespoonful;
Ice-water,	one gobletful;
Sugar,	one teaspoonful.

Stir the tamarinds in the water until dissolved; strain and sweeten.

Good in constipation.

Recipe 13.—Lemonade.

Take two lemons, wipe clean and peel very thin,* being careful to cut off none of the pith, or white. Now cut off all the pith

* In preparing lemon-peel for flavoring, pare very thin shavings from the surface, getting in none of the white, as this will render it bitter.

and throw it away. Cut the lemons into thin slices, take out all the seeds, put the slices and rind of one lemon into a pitcher, add a tablespoonful of sugar, pour onto these a pint and a-half of boiling water; cover and stand on the ice to cool. When cold, strain into another pitcher and it is ready for use.

Although this involves more time and attention than is usually given to the making of lemonade, yet the superior quality obtained well repays the extra trouble.

Recipe 14.—Iceland Moss Lemonade.

One handful Iceland Moss;
Two quarts boiling water;
Two lemons.

Wash the moss in two waters. Peel and slice the lemons, throwing away the peel. Mash the sliced lemon up with four tablespoonfuls of sugar; mix this with the moss, and pour over it the boiling water. Let it stand until cold. Sweeten to taste, and take it ice-cold. If too thick, add cold water.

Recipe 15.—Flax-seed Lemonade.

Four tablespoonfuls whole flaxseed.
One quart boiling water;
Juice of two lemons;
Sugar to sweeten.

Put the flaxseed in a pitcher, pour on boiling water, cover it and let it steep for three hours. When cold add the lemon-juice and sweeten to taste. If too thick, thin with cold water.

Let the patient have it ice-cold. The last two recipes make soothing drinks in throat and lung troubles.

Recipe 16.—Egg Lemonade.

Beat up one egg to a froth; make one goblet of lemonade, using the juice of an entire lemon; sweeten to taste, stir in the egg and add pounded ice.

This is a delicious and refreshing drink for the sick, and has, moreover, some nutritive value.

Recipe 17.—Hot Lemonade.

Lemon-juice, - - -	two tablespoonfuls;
Boiling water, - - -	one gobletful;
Sugar, - - -	one tablespoonful.

Put all into a hot bowl and stir for a few minutes. Drink hot. Good when it is desired to induce a perspiration.

Recipe 18.—Lemon-Ice.

Six lemons;
One large sweet orange;
One pint of water;
One pint of sugar.

Grate the peel of three of the lemons, and remove the rind of the orange. Squeeze out every drop of juice from the orange and all the lemons, and steep it in the rind of orange and lemons one hour. Strain, squeezing the bag dry; mix in the sugar, and then the water. Stir until dissolved, and freeze in a freezer, opening three times to mix all together.

Recipe 19.—Barley-water.

One pint boiling water;
Two ounces pearl barley;
Lemon-peel and sugar.

Wash the barley well in two or three waters. Put this into a pitcher, together with a tablespoonful of sugar and the peel from a quarter of a lemon, cut very thin. Pour onto this one pint of boiling water. Cover the pitcher and let it stand on ice until cold. When cold strain into another pitcher and it is ready for use.

Recipe 20.—Thick Barley-water.

Wash the barley. Put it in a sauce-pan, pour over it two quarts of cold water, bring to a boil, and let it boil for two hours. Pour into a pitcher with the thin peel of half a lemon; set it on ice to become perfectly cold. When cold, take out the lemon-peel and sweeten to taste.

Recipe 21.—Barley-water.

Boiling water,	two cups;
Barley,	two tablespoonfuls.

Wash the barley and soak it half an hour in a little luke-warm water, and stir, without draining, into the boiling water, salted very slightly. Simmer one hour, stirring often. Sweeten to taste and strain before using. This may be used temporarily as a substitute for milk when the latter disagrees.

Recipe 22.—Oatmeal-water.

Oatmeal,	two tablespoonfuls;
Cold water,	one pint.

Stir the meal into the water and let it stand one hour; strain and drink cold.

A refreshing drink in hot weather. Good in constipation.

Recipe 23.—Tapioca-water.

Tapioca,	one tablespoonful;
Cold water	one gobletful;
Boiling water,	one pint.

Wash the tapioca and soak it in the cold water two hours; pour the boiling water over it and boil slowly until the tapioca is dissolved.

Good in sickness of the stomach.

Recipe 24.—Sago Milk.

Sago,	one tablespoonful;
Cold water,	one teacupful;
Fresh milk,	one quart.

Wash the sago and soak it over night; put it into a farina kettle; boil till clear; sweeten. Drink hot or cold.

Recipe 25.—Rice-flour Milk.

Boiling milk,	two cups;
Rice-flour,	two tablespoonfuls.

Wet the rice-flour up with cold milk, and stir it into the boiling

milk. Let it boil for ten minutes, stirring all the time. Sweeten to taste and eat warm with cream.

This makes a simple, yet nourishing, dish for the sick.

Recipe 26.—Toast-water.

Cut thin slices of bread, and toast till nicely brown, with no suspicion of burning. Put several such slices into a bowl and pour over enough boiling water to cover. Cover the bowl closely, and let it steep until cold. When cold, strain, sweeten to taste and put a piece of ice into each glass. It may be flavored with lemon-juice.

This may be freely indulged in. It is of very slight nutritive value, and must not be depended upon as a food.

Recipe 27.—Elm Tea.

Take nice slippery-elm bark, break it into bits, pour boiling water over it, cover and let it stand until cold. Take with ice, and sweeten if desired.

Recipe 28.—Gum Arabic Water.

Gum Arabic, two teaspoonfuls;
Hot water, one pint;
Sugar, one teaspoonful;
Lemon-juice of one lemon.

Put all in a pitcher: keep it on a hot stove till the gum is dissolved. Use when cold.

The last two may be used as demulcent drinks in throat troubles and coughs.

Recipe 29.—Cafe au Lait.

Fresh, strong coffee and boiling milk, equal parts.

Strain the hot coffee through some muslin into the pot from which it is to be served. Add the hot milk immediately, set the pot on the hot stove for five minutes, and it is ready to serve.

Recipe 30.—Coffee and Egg.

Make a cup of strong coffee, adding boiling milk as usual, only sweetening rather more; take an egg, beat yolk and white together

thoroughly; boil the coffee, milk and sugar together, and pour it over the beaten egg in the cup in which you are going to serve it.

This simple recipe is used frequently in hospital practice. A sick person, needing nourishment and having lost appetite, can often be sustained by this when nothing else can be taken.

Recipe 31.—Egg-Water.

Cold water, one gobletful;
Whites of two eggs;
Sugar to sweeten.

Stir the eggs gently into the water, but do not beat them; add the sugar, or a little salt.

This is a bland, and yet nourishing, drink, which can be taken by a delicate stomach, when everything else is rejected.

BEEF-TEA RECIPES.

This much-abused article will find its chief use in those weak conditions in which the patient needs stimulating. There is very little nourishment in it, but it seems to have a remarkable power of sustaining life out of all proportion to the amount of solid matter which it contains.

If a patient has a continued fever and it is known that beef-tea will be wanted from day to day, too much pains cannot be taken in its preparation. It is well to observe the following

RULES:

1. Never let beef-tea boil.
2. Always begin with cold water.
3. The finer the beef is cut the better.
4. There should be no fat, gristle or bones adhering to the meat.
5. The proper proportion of beef and water is a pound to a pint.
6. Beef-tea that "jellies" when cold has not been properly made.
7. After being made, carefully remove from the surface all traces of fat.

8. To "warm up" beef tea, put it in a cup and set the cup in a vessel of boiling water.

To get all the virtue of the meat the following recipe is the best:

Recipe 32.—Beef-Tea.

Take one pound of fresh meat, cut very fine, soak in one-third of a quart of cold water over night. In the morning remove the meat, saving the water in which it has soaked. Put the meat into two-thirds of a quart of water and let it simmer for two hours, keeping the water up to its original level by replacing what is lost by evaporation. Now pour the beef-broth into the cold liquor in which the meat was soaked, squeezing the meat as dry as possible.

The meat which remains should be spread on a tin plate and slowly dried in an open oven. When perfectly dry it can be easily reduced to a powder in a mortar. Mix this meat-powder in the liquor and you have all the elements of the meat in a fluid form. Salt to taste and add twenty drops of muriatic acid and three grains of pepsin.

This is the only preparation of beef tea which contains all the virtue of the meat. Other beef-teas are stimulating, but they have no nutritive value whatever.

A simpler method, and one which will answer for ordinary purposes, is the following:

Recipe 33.—Beef-Tea.

Prepare a pound of beef in the usual manner and soak it in a pint of cold water for two hours. Now place the vessel containing the meat into a sauce-pan of water, and let the water in the latter boil for three hours (putting the meat and water into a stone bottle and this into a kettle of boiling water answers the same purpose). Replace water that is lost by evaporation. When done strain and salt to taste. The last vestige of fat may be removed by skimming the surface with a piece of white blotting-paper.

BROTHS AND SOUPS.

To Stew Oysters.

Take one quart of liquid oysters, put the liquor (a teacupful for

three persons) in a stew-pan, and add half as much more water; salt; a good bit of pepper; a teaspoonfull of rolled cracker for each person. Put on the stove and let it boil; have your oysters ready in a bowl. The moment the liquor begins to boil pour in all your oysters, say ten for each person. Now watch carefully, and as soon as it begins to boil take out your watch, count just thirty seconds, and take your oysters from the stove.

You will have your big dish ready with one and a half tablespoonfuls of cold milk for each person. Pour your stew on this milk and serve immediately. Never boil an oyster in milk.—(*Delmonico.*)

Recipe 34.—Oyster Broth.

Oysters, - - - - - one pint;
Cold water; - - - - one-half pint;
A little salt and pepper.

Cut the oysters into small pieces, put into a sauce-pan with water and salt, and simmer ten minutes; skim, strain off the broth, and add the pepper. A little milk may be added for those who prefer it. Serve hot with toast.

Recipe 35.—Mutton Broth.

Lean mutton, - - one and a half pounds;
Cold water, - - - one quart;
Salt to season.

Take a pound of fresh mutton, free from fat; cut into thin slices with a sharp knife; put into a suitable dish, salt, pour over it a quart of cold water and let it simmer over a slow fire for an hour, then let it boil for an hour longer. Strain off the broth through a sieve, refusing the meat fibre. Season with salt.

Recipe 36.—Beef Broth.

may be made according to the same recipe, taking a pound of beef free from fat. A piece of the neck or shoulder is best. These broths may be thickened with sago if desired.

Recipe 37.—Chicken Broth

Take a tender chicken; remove the skin and all fat. Cut it in two longitudinally and remove the lungs, which will be found

attached to the back. Now cut these halves into small pieces, cutting through bones and flesh. Put these pieces into a suitable dish, salt, pour on a quart of cold water and let it simmer for an hour and a half, then set it on a hearth or back of the stove and keep up the heat for half an hour longer. Strain through a sieve or coarse towel to separate the broth from the bones and fibre. Season to taste. Thicken with a little flour or sago if desired.

The yolk of an egg beaten up in any of these broths adds greatly to their nutritive value.

Recipe 38.—Mutton Chops.

When the patient is prepared to indulge in a meat diet, mutton chops will be found to be very acceptable. They should be broiled over a clear fire for six or seven minutes; turn frequently, and do not prick with a fork. Serve hot; season with salt and pepper after they come from the fire.

Game.—Pigeon, quail and snipe, are especially acceptable to the convalescent, and will tempt the returning appetite. Broiling is the best mode of cooking.

Chicken.—Tender spring chicken may take the place of the game when the latter is not to be had. It is very nice broiled, or may be stewed or fricasseed.

Recipe 39.—Omelette.

Two eggs;
One cupful buttermilk;
One-third teaspoonful soda;
Three tablespoonfuls flour.

Beat up the eggs, stir them into the buttermilk with the flour, add the soda, some salt, and stir all to a creamy consistence. Put three tablespoonfuls of this batter onto a hot, buttered griddle. When one side is brown, fold it on itself, turning one half on the other. Serve hot and eat with butter or syrup.

Recipe 40.—Chicken Jelly.

Half a spring chicken;
One quart cold water.

Break all the bones by pounding the chicken with a mallet, bones and meat together. Put this in a saucepan, pour on the cold water, cover the vessel, and let it simmer slowly until the meat is reduced to shreds and the liquid boiled down one-half.

Now remove it from the fire, strain it, and press it first through a cullender, then through a coarse cloth. You will have now a thick liquid which you can salt to taste (pepper if allowable). Return it to the fire and let it simmer five minutes longer. Pour into a dish and skim when cool. This will, when cold, set into a jelly. It is best to keep it on the ice.

Slice it up and give it to the patient cold, just off the ice. It may be eaten alone, or with toast, Albert biscuit, or unleavened wafers. It is very nice made into sandwiches by putting the jelly between thin slices of bread spread lightly with butter.

This chicken jelly is one of the most delicate meat dishes for the sick. It can be given in a great variety of cases, it is easily made and very tempting to a dainty appetite. Some patients can take this cold when nothing else of a solid nature can be eaten.

Recipe 41.—Cod-Fish.

With a sharp knife cut thin pieces of the cod-fish cross-ways of the grain of the fibres; soak this over night to extract the salt; the next morning pour off the water in which it has soaked, put the fish into some fresh water and cook it for half an hour, then add a teacupful of milk and a tablespoonful of flour; just before dishing for the table beat up an egg and stir this in.

Recipe 42.—Raw Meat.

Scraped beef has been successfully used in the dietetic treatment of cholera-infantum. Take a piece of fresh beef with one surface cut across the grain; scrape this surface with a spoon until as much of the pulp is scraped off as possible. Now, with a sharp knife, take off a thin slice and make a fresh surface and scrape as before, repeating this until it has all been reduced to a soft *puree*. By this method the indigestible fibrous part of the meat is rejected. Feed this *puree* to the baby, after adding a little fine salt to it. A little pepsin will aid its digestion.

Many sick children have been brought up from very low conditions on this diet alone.

Recipe 43.—Albumen Water.

Cold water, - - - - one-half pint;
Whites of two eggs;
Sugar-of-milk, - - - - one teaspoonful.

Drop the whites of the eggs into the water and stir gently without beating, until they are well mixed. Sweeten. Give cold or frozen.

This will be found to be a valuable aid in nourishing a child when sick with diarrhœa.

Koumiss.

Another form of milk, the use of which has been attended by great benefit in many cases of consumption, is koumiss, or Arabian milk wine. It is said to have been thus used by the Arabs for many centuries, and is now very extensively used by the tribes living on the steppes of Russia, and it is only comparatively recently that it has been known to the civilized world, having been introduced by Dr. Jarotzki, a Russian physician. The Arabs make it of mare's milk, but an excellent article can be made from the milk of the cow. It contains some alcohol, and is contra-indicated in those cases in which the latter should not be used.

There are many different methods of making koumiss, almost as many as there are people who make it. No better article, however, can be made than that supplied by the following

Recipe 44.

Fresh, rich milk, - - - three quarts;
Hot water, - - - - three quarts;
White sugar, - - - half a pound;
Good yeast, - - - - one teacupful.

Dissolve the sugar in the hot water, add this to the milk, and let them cool down until lukewarm. Now slowly and carefully stir in the yeast.

Set the crock containing this in a warm place, as you would

bread to rise;—stir it occasionally, and in five or six hours it will be slightly sparkling, and small bubbles will rise to the surface when stirred. When it reaches this stage put it into stout bottles, tie down the corks, and set the bottles in a cool place—in the refrigerator or on the floor of a cool cellar.

A thick mass will form on the surface (the caseine) when it begins to separate, and once or twice a day, for several days, the bottle should be well shaken, and this will fall in a powder to the bottom.

When two days old it is ready for use, although it will keep for a much longer time, and may be used when a week or more old. It is best, however, when from two to four days old.

Care should be taken in opening, as it is highly effervescent. Use a champagne-tap, if possible.

In starting a new lot, instead of yeast use a bottle of old koumiss, stirring it into the milk and water carefully, as directed for the former. If a larger quantity be wanted than this recipe provides for—six or seven quarts—the quantity of the different ingredients used may be correspondingly increased.

If there be too much alcohol generated, put in less sugar.

Very stout bottles must be used—ordinary ones are apt to burst.

If you do not succeed in making a good article the first time, try again, and yet again. Like bread-making, this is an art in which practice makes perfect.

As already said, the use of koumiss has been followed by great benefit in many cases of consumption. A bottleful a day may be taken, in addition to the ordinary diet. Drink a glassful before each meal.

RECTAL ALIMENTATION.

In some diseases, when food cannot be taken by the mouth, it becomes necessary to resort to rectal alimentation. Life in this way may be supported for many weeks, no food whatever being taken into the stomach.

The most common conditions in which this becomes necessary are—

Ulcer of the stomach;

Stricture of the œsophagus;

Inflammation of the stomach;

Diphtheria, when the patient is no longer able to swallow;

Debility or exhaustion, the patient being too weak to take food;

Finally, any condition in which the stomach rejects all that is taken into it.

The following are the

RULES TO BE OBSERVED:

Preparatory to administering an enema, empty and wash the rectum by giving an injection of clean, warm water.

1. Force the enema in slowly.
2. Throw it as high up as possible.
3. Inject at intervals of two hours.
4. Inject no more than half a teacupful at a time.
5. Let the enema have a temperature of about that of the body—98 or 100 degs. Fah.

Recipe 45.—Milk Enema.

Warm milk, with a little salt added, makes a simple and readily-absorbed enema. Heat the milk to the proper temperature, inject half a teacupful every two hours, and the patient is getting considerable nourishment.

Recipe 46.—Beef-Tea Enema.

Beef-tea, - - - - - -	one pint;
Raw beef, - - - - -	three ounces;
Dilute muriatic acid, - - - -	twenty drops;
Pepsin, - - - - - -	two grains.

Take of beef-tea one pint. Take three ounces of raw beef, free from fat, scrape it with a spoon, and chop it until reduced to pulp; stir this into the beef-tea, heated to the proper temperature, add the acid and pepsin, and it is ready to inject, according to the rules given.

Also, a simple enema of beef-tea is sometimes given without the addition of scraped beef, but it is not so valuable an aliment as that prepared as in this recipe.

DEFIBRINATED BLOOD ENEMA.

Fresh blood is the most valuable of tissue foods, and, when from disease the system is no longer able to keep up its usual supply, we are but imitating nature when we introduce this pabulum into the shrunken veins. Blood may be looked upon as meat in solution, and in a far better state to be appropriated by the system than any that the arts of man can provide. The blood must necessarily be deprived of its fibrin, but so small a quantity of nitrogenous elements is lost by defibrination, that its value as a nutrient is not materially lessened.

Defibrinated blood, then, is the most valuable nutrient enema that can be used to sustain patients demanding this kind of nourishment.

Recipe 47.

Go to the slaughter-house and take from the large pan the blood of a recently-killed beef. It must be taken fresh, as soon as it has flowed from the neck of the animal, and before it has had time to coagulate or form a clot. At this time, or even while it is flowing, it must be whipped with a bunch of straw or a handful of twigs, to remove the fibrin. Secure the blood-serum which remains in a wide-mouthed jar. When wanted for use this may be brought to the proper temperature by setting the jar in a vessel of warm water. Inject as you would milk or other enemata.

Recipe 48.—Digestive Fluid.

Copy the following recipe and take it to your druggist:

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Pepsin,
Acid mur. dil., - - - - - each two drachms;
Glycerine,
Aqua cinnamonii, - - - - - each two ounces.

M.

Take a teaspoonful in lime-water after each meal.

This will be found to be a great aid to digestion.

Good preparations of pepsin can always be had at the druggist's. It is a good plan to keep some on hand at all times, for in sickness it is a great aid to digestion. It should be used in the

preparation of animal foods alone, as it is useless in the digestion of the starches.

Recipe 49.—Malt-Infusion.

Crushed malt, - - - - three ounces;
Cold water, - - - - - one-half pint.

Mix these in a vessel and allow it to remain for from twelve to fifteen hours. Then run it through filtering paper until it becomes perfectly clear.

This is rich in diastase, and contains maltose in considerable quantities. It is liable to fermentation, and hence must be prepared fresh daily. It may be preserved, however, by adding a few drops of chloroform to the infusion, and keeping it in a bottle, well corked.

The malt-infusion is to be used to aid in the digestion of farinaceous (starchy) foods. It may be used by the dyspeptic, or may be added to the infant's food.

Recipe 50.—Brown Bread.

Prepare a good sponge, as for white bread.

Put into the bread-pan two parts brown flour (do not sift brown flour), one-third white flour, and to every quart of this mixture allow a handful of Indian-meal, with a teaspoonful of salt.

Wet this with the sponge, and when it is mixed, add, for a loaf of fair size, a teacupful of molasses. The dough should be very soft. If there be not enough sponge to reduce it to the desired consistency, add a little lukewarm water.

Knead this long and thoroughly, and set it to rise, which will require a longer time than for white bread. Give it plenty of time. Knead again, make into loaves and set for a second rising. When light bake steadily, giving it a longer time than white bread requires. Be careful that it does not burn. Do not cut when hot.

Recipe 51.—Unleavened Wafers.

Mix good, dry flour, with a little salt in it, to a stiff dough with milk. Roll out thin. Cut into round cakes, and roll these again almost as thin as letter paper. Bake very quickly. They may also be mixed with water.

These wafers are easily digested, very delicate and fill an important place in the dyspeptic's dietary. They can be used as crackers, eaten with soups and broths, and in a variety of other ways.

Recipe 52.—Unfermented Bread.

Take one ounce of bicarbonate of soda (baking soda) and one quarter ounce of salt, mix with four pounds of flour. Mix this with a quart of cold water containing half a fluid ounce of muriatic acid, and make a thin dough with as little kneading as possible; put it in the oven without delay. It requires a longer time for baking than it takes for fermented bread.

This is better for the dyspeptic than the ordinary fermented bread.

Recipe 53.—Unfermented Brown Bread.

Mix three pounds of brown-flour with ten drachms of bicarbonate of soda; make this into a dough with twenty-five ounces of cold water containing twelve and a-half fluid drachms of muriatic acid. Bake immediately it is prepared.

Recipe 54.—Bread Panada.

Place in a saucepan some very thin slices of bread-crumb, and rather more water than will cover it. Boil until the bread becomes pulpy, strain off the superfluous water, and beat up the remainder to the consistence of gruel. Season to taste. Some prefer it sweetened, while others eat it with salt and pepper.

Recipe 55.—Rusk.

Toast dry crusts of bread in a moderate oven until they are well browned; do not let them burn. When cold, pound in a mortar, or grind in a coffee-mill, until reduced to a coarse meal. Eat in a dish with milk or cream, as you would mush. Sweeten if desired.

Recipe 56.—Cracker Panada.

Split ten small oyster crackers, spread each piece with butter, and lay them in a bowl. Sprinkle with sugar, pour on enough hot water to cover, and grate a little nutmeg over them. Cover the bowl and let it stand five minutes.

Recipe 57.—Cracker Panada.

Six Boston crackers;
Two tablespoonfuls white sugar.

Split the crackers and pile in a bowl in layers, the sugar and a little salt scattered among them. Pour enough boiling water on them to cover them, and set on the hearth, closely covered for more than an hour.

Eat from the bowl, with more sugar, if desired. The crackers should be clear, soft and jelly-like, but not broken.

Recipe 58.—Bread Sauce.

Crumb up two slices of stale bread, or two dry biscuits; pour on this half a pint of hot water; season with salt and pepper; boil until it is smooth and add a piece of butter. A little onion will lend it zest for some.

Recipe 59.—Bread Jelly.

Cut the crust from some slices of stale bread, and toast nicely without burning. Pile in a bowl, sprinkling sugar and a little salt between; cover well with boiling water, and set with a tight lid on top in a pan of boiling water. Simmer well until the contents of the bowl are like jelly. Eat warm with powdered sugar and nutmeg.

Recipe 60.—Dyspepsia Crackers.

Take of wheat-meal one quart; butter, one tablespoonful; water enough to make a very stiff dough. Beat this dough with a potato masher or rolling-pin for half an hour, laying it on a bread-board for the purpose; roll it into a ball and beat it out over and over again. Now roll it out very thin, cut into round shapes, prick with a fork and bake in a quick oven.

The wheat-meal should be especially prepared for these crackers. If no other is to be had use good brown flour. But too often this is made up of poor flour, middlings and bran. To secure a good article, buy some good wheat, take it to the mill and have it ground. Let the bran be sifted out, but leave the middlings and flour together, and you have a good wheat-meal.

Recipe 61.—Gluten Bread.

Milk, - - - one pint;
Warm water, - - one pint;
Butter, - - - one heaping teaspoonful;
Yeast, - - - one-half cake;
Two eggs.

Mix the milk and water; soak the yeast-cake in a little warm water, beat the eggs well and add these to the milk and water; stir in gluten flour until a soft dough is made, work in the butter, kneading as you would ordinary bread-dough. Mould, put in pans to rise, and when light bake in a hot oven.

Gluten bread requires less yeast than ordinary bread, and less time in rising. The dough should be made softer than for white-flour bread.

Recipe 62.—Gluten Pudding.

Soak two thick slices of gluten bread, broken up, in half-a pint of milk; add one beaten egg; sweeten with glycerine and bake in a small basin.

This makes a tolerably good pudding for the diabetic—enough for one person.

Recipe 63.—Gluten Wafers.

Stir some gluten flour, with a little salt, into cream to make a dough which can be rolled out very thin. Cut into forms and bake in a quick oven.

Gluten flour can also be used for making gruels, for thickening soups and gravies, and in frying oysters.

Recipe 64.—Bran Water.

Wheat bran, - - - - two quarts;
Cold water, - - - - three quarts.

Mix the two in a large dish, and let the bran soak over night. The next morning rub and squeeze the bran with the hands until all the meal which adheres to it is washed off; strain through a fine sieve, pressing and squeezing until the bran is almost dry.

This makes a nutritious and pleasant drink for the diabetic, and, as it contains no starch, it can be taken with impunity.

BLANC-MANGES, JELLIES, AND CUSTARDS.

Recipe 65.—Arrowroot Blanc-Mange.

Milk, - - - - one cupful;
Arrowroot, - - - four teaspoonfuls;
Sugar, - - - - two teaspoonfuls.

Make a smooth paste of the arrowroot, with cold water. Stir this into the milk while the latter is boiling. Add the sugar, flavor with vanilla, stir all the time and boil until it thickens. Turn out, and when cold eat with cream.

Recipe 66.—Arrowroot Custard.

Boiling milk, - - - two cupfuls;
Arrowroot, - - - three teaspoonfuls.
One egg and two tablespoonfuls white sugar well beaten together.

Wet the arrowroot up with a little cold milk, mix this paste with the boiling milk, and stir for three minutes. Take it from the fire and whip in the egg and sugar. Boil two minutes longer, flavor with vanilla or other extract, and pour into moulds.

Recipe 67.—Tapioca Jelly.

Cold water, - - - three cupfuls;
Tapioca, - - - - one cupful;
Juice of one lemon.

Put the tapioca in a two-quart basin, and pour over it sufficient water to cover it. Let it soak four hours. Now set the basin in a saucepan of boiling water; pour more warm water over it, if it is too thick. Keep the water in the saucepan boiling, and stir the tapioca frequently. Cook until it becomes clear. If too thick at this time, put in a very little boiling water. When quite clear, put in the lemon juice and sweeten to taste. Pour into moulds. Eat cold, with cream, flavored to suit.

This will be found an excellent dish, easily digested, simple, and very tempting to the sick.

Recipe 68.—Farina Blanc-Mange.

Milk, - - - one pint;
Farina, - - - two tablespoonfuls.

Heat the milk to boiling; stir in the farina and a little salt. Boil for twenty minutes in a farina-kettle. Flavor and sweeten to taste and pour into moulds. Set in a cool place. Eat with cream and sugar.

Recipe 69.—Tapioca Blanc-Mange.

Tapioca,	one cupful;
Boiling milk,	three cupfuls;
White sugar,	three tablespoonfuls.

Soak the tapioca four hours in two cups cold water, and stir the whole into the boiling milk. Sweeten and boil slowly for fifteen minutes, stirring all the while. Take off, flavor to suit, and pour into moulds.

Eat cold with cream. Wash the tapioca well before soaking.

Recipe 70.—Tapioca Pudding.

Take an ounce of tapioca, soak it in an ounce of cold water for two hours; pour off this water, add a pint and a half of milk and boil slowly until it is well incorporated; stir into this one-half ounce of sugar beaten up with two eggs. Season with lemon.

Recipe 71.—Gelatine Jelly.

Place one ounce of gelatine in half a pint of cold water—soak for ten minutes; add half a pint of boiling water and stir until the gelatine is dissolved. Add the juice of two lemons, sugar, and the white of an egg, well beaten; stir these in, boil for two or three minutes, strain through a jelly-bag and let it set.

Recipe 72.—Gelatine Charlotte Russe.

One pint cream;
One-half ounce gelatine, dissolved in a cup of hot milk;
Whites of two eggs;
Two tablespoonfuls of white sugar.

Whip the cream light, beat the eggs to a stiff froth, and mix these and the sugar all three together. Flavor with lemon or vanilla, and last beat in the gelatine, which should be quite cold before it is added. Pour into a dish and set on the ice. This is a nice dish for those who can take anything so rich.

Recipe 73.—Jelly of Iceland Moss.

One handful Iceland moss;
One quart boiling water;
Juice of two lemons.

Wash the moss in five waters, and let it soak for an hour in a little cold water. Now stir it into the boiling water and simmer until it is dissolved. Put in the lemon-juice, sweeten to taste and strain into moulds.

This is an excellent dish for convalescents, being often taken with relish when nothing else tempts the appetite. It may be used in all cases except where there is a tendency to looseness of the bowels.

Recipe 74.—Sago Custard.

Two eggs;
One pint milk;
One tablespoonful sago.

Boil the sago in a little water till clear; add the milk and let it come to a boil, then add the eggs, well beaten, and sugar to taste. Put the vessel containing the custard into another vessel of boiling water; stir till it thickens a little. When partly cold flavor with lemon or vanilla.

Recipe 75.—Spanish Cream.

One quart milk;
Yolks of three eggs;
One-half box gelatine;
Two tablespoonfuls sugar.

Soak the gelatine for an hour in the milk, put on the fire and stir well as it warms. Beat the yolks very light with the sugar, add to the scalding milk, and heat to boiling point, stirring all the while.

Flavor with vanilla or lemon. When almost cold, put into a mould wet with cold water.

Recipe 76.—Baked Custard.

Two eggs;
One pint milk;
Two tablespoonfuls sugar.

Scald the milk; beat up the yolks with the sugar, add this to the milk, and when well mixed stir in the whites, previously beaten light. Flavor to taste. Pour into cups and bake until firm. Eat cold from the cups.

Recipe 77.—Arrowroot Jelly.

Boiling water, - -	one cup;
Arrowroot, - - -	two teaspoonfuls;
White sugar, - -	two teaspoonfuls.

Dissolve the sugar in the cup of water; put this on the fire and bring it to a boil. Wet the arrowroot in a little cold water and rub it smooth. Stir this into the hot water while it is boiling. Add one teaspoonful of lemon-juice and keep it boiling until it is clear. Wet a cup in cold water, and pour in the jelly to form.

Eat when cold, with cream and sugar. This is a delicate dish and will tempt many a dainty appetite.

Recipe 78.—Sago Blanc-Mange.

One pint milk;
One-half pound sago.

Soak the sago in cold water for four hours. Heat the milk and stir in the soaked sago. When it has dissolved, sweeten to taste. Boil slowly fifteen minutes, stirring all the time; take from the fire, beat until nearly cold, pour into moulds dipped in cold water. Turn out and eat with sweetened cream.

Recipe 79.—Floating Island.

One pint milk;
Two eggs;
Two tablespoonfuls white sugar;
Teaspoonful vanilla extract.

Beat the yolks well, stir in the sugar, and add the hot, not boiling, milk, a little at a time. Boil until it begins to thicken. When cool add the flavoring, pour into a glass dish, first stirring well. Heap upon it a meringue of the whites beaten to a froth. This well-known dish makes a very agreeable one for the sick or convalescent.

Recipe 80.—Cottage Cheese.

Heat sour milk until the whey rises to the top. Pour off the whey, put the curd in a bag and let it drip for six hours, without squeezing it. Put it in a wooden bowl, chop fine with a wooden spoon, salt to taste, and work to the consistence of soft butter, adding a little cream and butter as you proceed. Mould into balls and keep in a cool place. It must be eaten when fresh.

There are few nicer dishes than this for the sick or convalescent.

Besides these domestic dishes, preparations of malt, extract of malt or maltine, will help to build up the atrophied tissues and hasten the return of strength.

GRUELS, ETC.

Recipe 81.—Oatmeal Gruel.

Take three ounces of oatmeal and boil slowly in four pints of water till reduced to two pints. Strain through a sieve. Add milk if it is wanted thin.

Recipe 82.—Cornmeal Gruel.

Cornmeal,	one cupful;
Boiling water,	one quart.

Make a thin paste of the meal, mashing out all lumps. Stir this into the boiling water, letting it boil for three-quarters of an hour, being careful that it does not burn. Salt to taste.

Recipe 83.—Sago Gruel.

Water,	two cupfuls;
Sago,	two tablespoonfuls;
Sugar,	three teaspoonfuls.

Put the sago into water and warm it by setting in a saucepan of boiling water. Keep it hot for one hour, stirring often. Now boil it for ten minutes, stirring well; season with lemon or vanilla, and pour into a bowl to cool. Eat it either warm or cold.

Recipe 84.—Arrowroot Gruel.

Take three teaspoonfuls of arrowroot flour; mix this into a soft paste with a little cold water; pour upon this half a pint of boiling

water, stirring well until it is thoroughly mixed; boil for five minutes, add some milk and a little salt, and sweeten to taste.

Recipe 85.—Farina Gruel.

Farina,	one tablespoonful;
Boiling water,	one pint;
Salt,	a pinch.

Sprinkle the farina into the water as it boils, stirring briskly to prevent lumps forming. Season with salt and simmer half an hour. Just before removing from the fire, stir in a tablespoonful of cream.

Recipe 86.—Milk Toast.

Pare off the crust from stale, light bread; slice half an inch thick and toast quickly. Dip each slice, as it comes from the toaster, in boiling water.

Butter thinly, sprinkle a little salt over, and lay in a deep, covered dish.

Have ready in a sauce-pan enough boiling milk to cover the toast well. Thicken this a very little with flour, being careful that it is not lumpy. Salt this milk, melt in it a bit of butter, and pour over the toast. Cover closely and let it stand five minutes before serving.

Recipe 87.—Potato Surprise.

Scoop out the inside of a sound potato, leaving the skin attached on one side of the hole, as a lid. Mince up finely the lean of a juicy mutton-chop, with a little salt and pepper, put it in the potato, pin down the lid, and bake or roast. Before serving —in the skin—add a little hot gravy if the mince seems to be too dry.

Recipe 88.—Tomato Soup.

Peel six good-sized tomatoes and cut them into small pieces; put them into a sauce-pan, with a quart of water, and boil until tender; season with salt and pepper. Now stir into the water half a teaspoonful of baking-soda. Lift the kettle from the stove when stirring in the soda, or the soup will run over as it foams. Boil again, and add a pint of sweet milk. Put broken crackers into a dish, pour the soup over them and serve immediately.

Recipe 89.—Asparagus.

Bind the asparagus in a bundle with a piece of tape, keeping the buds all one way; cut the stalks of equal length, and be careful to cut off all that is tough. Put it into a porcelain-lined kettle, with enough slightly-salted boiling water to cover, and boil until tender. Season delicately with butter and pepper and more salt if desired.

Recipe 90.—Baked Potatoes.

Wash and wipe dry as many potatoes as are required, being careful to have them of uniform size. Bake in a brisk oven until they yield to pressure between the fingers; remove at once from the oven and break the skin to let out the steam. Serve immediately with salt, butter and pepper.

Recipe 91.—Stewed Celery.

After the celery has been thoroughly washed, cut the stalks into pieces four or five inches long, lay them (all one way) in a saucepan, with just enough slightly-salted, boiling water to cover. Boil slowly until tender, drain, and season with butter and pepper. Of reputed value in rheumatism.

PART VII.

CHAPTER I.

MATERIA MEDICA.

In the following list of the more important medicines, distinguishing characteristics for their employment are given. When a medicine is mentioned as being useful in a certain disease, the article describing that disease should be consulted, by which further particulars may be learned both as to the stage and phase of the disease to which the medicine is more particularly adapted.

Acidum Nitricum (*Nitric Acid*).

Principal Uses.—In diseases of those parts where the skin and mucous membranes become merged into each other, viz., mouth, throat, nose, larynx or upper portion of the windpipe, anus and vagina; scrofulous and syphilitic affections, especially in the case of those patients who have taken much mercury; dry cough proceeding from the larynx; ulcerated throat, salivation (also locally as a gargle or mouth wash); chronic diseases of the liver; fistula, and fissured condition of the anus; bleeding piles; chronic vaginal leucorrhœa.

Acidum Phosphoricum (*Phosphoric Acid*).

Principal Uses.—Disorders of the nervous system, with debility; brain fag from excessive mental application, grief; drain

on the system or sexual excesses; chronic painless diarrhœa; colliquative sweats of phthisis pulmonalis; spinal weakness with frequent and copious urination; falling off of the hair from debility; scrofulous caries of bones; diabetes when originating in the nervous system; debility of the male sexual organs resulting from improper use; frequent seminal emissions and dragging pains in the testes.

Aconitum Napellus (*Monk's Hood*).

Principal Uses.—All feverish and inflammatory affections, especially at their commencement, when it is desired to reduce the force and frequency of the pulse. Acute bronchitis, pneumonia (first stage), feverish colds and the first stages of acute rheumatism, rheumatic fever, gout, catarrhal, inflammatory and simple fevers, measles, croup, chicken pox and scarlatina, congestions, &c. This medicine is not employed when the feverish condition arises from a poisoned state of the blood, such as exists in enteric or typhoid fever, typhus, and intermittent fever (*vide Baptisia*). It usually exerts a favorable influence within twenty-four hours or so, and if it fails to do this, it may be considered as being inappropriate to the case. It is indicated by the following symptoms, viz., hot, dry skin, with thirst; shivering and chills, followed by burning heat; strong, rapid pulse; restlessness, flushing of the face, anxiety; quick and labored breathing; hot, scanty, and high-colored urine.

Antimonium Tartaricum (*Tartar Emetic*).

Principal Uses.—Affections of the mucous membranes, the lungs, and skin; catarrhal inflammation beginning in the throat and extending to the bronchial tubes and the lung tissues. Bronchitis, pneumonia (later stage), coughs of children and aged persons attended with *rattling breathing* when there is much mucus and inability to expel it; chronic cough, with profuse and easy expectoration of mucus with much yawning. Pustular eruptions of the skin, small pox.

Apis Mellifica (*Honey Bee*).

Acts chiefly on the mucous tissues of the tongue, fauces, throat and neck of the bladder.

The guiding symptoms are red spots on the skin like bee-stings; stinging pains in the affected parts; red and highly inflamed tonsils; dryness of the mouth and throat with stinging pains when swallowing; yellow, watery diarrhœa, worse in the morning; diarrhœa every morning; urine dark-colored and scanty; soreness at pit of stomach; dropsy with thirst; diphtheria with great debility in the beginning; bad effects from suppressed scarlet fever; useful in dropsy of the chest.

Arnica Montana (*Leopard's Bane*).

Principal Uses.—Affections resulting from mechanical injuries, falls, fatigue, over-lifting, straining, severe shocks, such as occur in railway accidents or in the hunting field; concussions of the brain; bruises, sprains, strains, corns and bunions, (applied locally in the form of plaster); chilblains (unbroken); after pains; sore nipples; spitting of blood when caused by violence or over-exertion.

Arsenicum Album (*White Arsenic*).

Principal Uses.—Cold in the head with swelling, stoppage, or burning of the nose, with thin acrid discharge; influenza, asthma, wheezing breathing, diseases of the heart, diarrhœa with watery, burning motions of a green or dark color, and sometimes with vomiting; cholera; diseases of the stomach and bowels when accompanied by *great prostration* and *burning* pains; skin diseases, such as chronic urticaria or nettle rash, eczema, acne, lichen, prurigo, psoriasis, and lepra; eruptions about the mouth and other parts attended with burning and the discharge of a thin watery fluid; chronic intermittents when quinine fails; typhoid, and putrid fevers; ophthalmia, with burning pains; diseases characterized by *depressed* and *exhausted vitality*, as in persons debilitated by excesses; dropsical complaints; old and obstinate ulcers; Bright's disease of the kidneys; wasting of children; neuralgia, sleeplessness, chorea, or St. Vitus' dance.

Baptisia (*Wild Indigo*).

Principal Uses.—Gastric, enteric, or typhoid fever, when, if given early, it will frequently produce copious perspiration and

shorten the attack; later in that disease it will be found useful alternately with *Arsenicum;* the milder forms of diphtheritic throat alternately with *Belladonna;* chronic dyspepsia when there is a sinking sensation at the pit of the stomach.

Belladonna, Atropa Belladonna (*Deadly Nightshade*).

Principal Uses. — Inflammatory diseases characterized by *bright redness* of the parts, intolerance of light and sound, and other brain symptoms; sore throat, with redness and sense of rawness; toothache and neuralgia, with throbbing and redness of the face; convulsions; delirium; violent headache, especially frontal, with noises in the head, enlarged pupils and throbbing; giddiness; threatened apoplexy; erysipelas (of a bright red color); mumps; quinsy; hoarseness; loss of voice; whooping cough; violent dry cough, with tickling in the throat, worse at night; eruptive fevers, especially simple scarlatina; sleeplessness and restlessness; bronchitis of children, epilepsy; inflammation of the eyes and breasts; frequent passage of urine, and involuntary escape of same at night in cases of delicate children; uterine congestions and inflammations; childbed fever.

Bryonia Alba (*White Bryony*).

Principal Uses.—In bronchitis, pneumonia, pleurisy, cold on the chest, with stitches and shooting pains increased by coughing, by deep inspiration or even movement; dry cough, with a sensation of tickling under the breast bone; rheumatism of the joints and muscles, especially when the *pain is aggravated by movement;* lumbago, sciatica, rheumatic fever, jaundice, bilious headaches, bilious vomiting, heartburn, water-brash, bitter or sour risings; pains (gastric), coming on whilst eating; constipation from torpor of the bowels. Depression of spirits and an irritable temper are additional indications for Bryonia.

Cuctus Grand (*Midnight Blooming Cereus*).

The leading uses of this remedy are constriction of the heart and other parts, affections of the heart and large blood-vessels. Palpitation from nervous or organic diseases, when lying on the left side, heart complications in rheumatic fever with excessive

impulse of the heart's action, acute and chronic carditis, menses too scanty or attended with great pain in the evening, pulsating pain in the uterine region. In some respects acts like Aconite, but in affections of the heart its action is unique.

Calcarea Carbonica (*Carbonate of Lime*).

Principal Uses.—Affections of a scrofulous, tubercular, or rickety nature, or other affections depending on defective digestion and assimilation with debility and loss of flesh, especially in children; delayed or difficult dentition; glandular swellings; chronic inflammation of the eyes, with agglutination of the lids; deafness, with snapping and roaring in the ear, especially when chronic; chronic diarrhœa; diseases of women, copious and premature menstruation, (to be used in intervals); acid dyspepsia, nightly head perspirations.

Cantharis (*Spanish Fly*).

Principal Uses.—In affections of the urinary organs; pain in the loins; scalding or bloody urine; inflammation of the bladder and kidneys; strangury and retention of urine; externally for burns and scalds (diluted).

Carbo Vegetabilis (*Vegetable Charcoal*).

Principal Uses.—Derangement of the digestive organs; flatulent distention of the stomach and abdomen, with acidity, heartburn or waterbrash; burning and contractive pain and emission of fetid flatulence; offensive breath; tendency to diarrhœa; piles; toothache, with spongy or ulcerated gums; hoarseness or loss of voice from speaking too much; unhealthy, burning, and fetid ulcers.

Chamomilla, Matricaria Chamomilla (*Matricary*).

Principal Uses.—Diseases of infants and children, especially those incidental to teething, such as convulsions, diarrhœa, with green or yellow slimy or watery motions, preceded by cutting pains, difficult dentition, when one of the cheeks is hot and red, with irritability of temper and restlessness, swollen gums and feverishness; rash; toothache from indigestion, worse after eating

and taking warm drinks; neuralgia, with tearing, dragging, and lancinating pains which seem intolerable owing to extreme sensitiveness of the patient; nervous excitement and the effects of anger; bilious disorders; a profuse dark clotted menstrual discharge; cramp in the legs of pregnant women.

China Officinalis (*Peruvian Bark*).

Principal Uses.—Debility, with easily-provoked perspiration, particularly when the causes are loss of blood, diarrhœa, sexual excesses, prolonged nursing, loss of any of the animal fluids, fatigue, broken rest, fevers, purgatives, or mercury. It is also useful in dyspepsia, want of appetite, flatulence, painless diarrhœa, brow ague, intermittent and remittent fevers, periodical neuralgia from debility, headache with singing, buzzing, hammering or roaring noises in the head, pressing weight at the top of the head, and night sweats.

Cimicifuga Racemosa (*Black Snake Root*).

Principal Uses.—Rheumatic, nervous, and uterine affections; pain in the side, loins and neck; subacute inflammation of the joints, especially when associated with uterine affections, pains being worse at night and in rough, windy weather; affections of the heart resulting from rheumatism; painful menstruation with either copious dark or scant discharge; nervousness, depression, cramps, and other ailments of pregnancy; sinking sensation at the pit of the stomach; headaches at the change of life.

Cina Anthelmintica (*Worm Seed*).

Principal Uses.—Affections of the intestines which give rise to worms, and are usually accompanied by some of the following symptoms, viz., pale face, dark semicircles under the eyes, emaciation, itching and picking of the nose, grinding the teeth and starting during sleep, voracious appetite varying with the opposite condition, itching at the seat, diarrhœa, cutting pains in the abdomen, wetting the bed, hoarse hollow cough, convulsions or twitching of various parts of the body, and bloated abdomen (*vide* Santonine).

Cocculus Indicus (*Indian Berries*).

Principal Uses.—Sickness or giddiness occasioned by motion, as by traveling in a carriage; sea sickness; menstrual colic with scanty discharge; spasms of the abdomen of a nervous origin; constipation; nausea. Excessive irritability, sensitiveness, and apprehensive fears are indications for the use of Cocculus.

Coffea Cruda (*Raw Coffee*).

Principal Uses.—In affections of the nervous system, such as morbid sensitiveness and irritability; sleeplessness; wakefulness of children; nervous headache or toothache; nervous disorders of hysterical women or excitable children (useless employed medicinally when the patient is an habitual coffee drinker).

Colchicum Autumnale (*Meadow Saffron*).

Principal Uses.—Gout and gouty affections.

Colocynthis (*Bitter Cucumber*).

Principal Uses.—Flatulent colic with diarrhœa; facial neuralgia, chiefly on the left side, with headache and toothache; sciatica.

Cuprum (*Copper*).

Principal Uses.—Cramps and convulsive movements; the cramps and vomiting of cholera; St. Vitus's dance; epilepsy, with violent convulsions; whooping cough.

Digitalis Purpurea (*Purple Foxglove*).

Principal Uses.—Disease of the muscular tissue of the heart, weakness of the heart and feeble circulation, the pulsations being intermittent; dropsy.

Drosera Rotundifolia (*Round-leaved Sundew*).

Principal Uses.—Whooping cough of a suffocating nature, sometimes attended by bleeding from the nose; dry spasmodic cough with a feeling of suffocation; hoarseness; cough followed by vomiting.

Dulcamara (*Bitter-sweet*).

PRINCIPAL USES.—Various affections arising from damp or a thorough wetting, such as cough or cold in the head, sore throat, elongated uvula, stiff neck, nettle rash, diarrhœa, etc. It should be taken as a preventive after exposure to damp.

Ferrum (*Iron*).

PRINCIPAL USES.—Anæmia; chlorosis and general debility; spitting of blood; headache of debility; irritability of the bladder and urethra; gleet; profuse menstruation; chronic diarrhœa; diphtheritic throat affections.

Gelsemium Sempervirens (*Yellow Jessamine*).

PRINCIPAL USES.—Facial neuralgia, with twitching of the muscles, especially on the left side; congestive headaches with giddiness; the head symptoms of heart disease; inflammation of the brain and spinal cord; paralysis of the eyelids; simple scarlatina of children; spasmodic croup with cerebral symptoms; infantile remittent fever; measles; loss of muscular power arising from nervous affections; weakness of sight from over-exertion; double vision; excessive action of the heart with great palpitation; and some cases of local paralysis, as of the bladder; loss of voice from catarrh, *spasmodic* menstrual pains.

Glonoine (*Nitro-Glycerine*).

PRINCIPAL USES.—Severe throbbing congestive headache with palpitation of the heart, and at times nausea and vomiting; especially useful for the headaches to which females are subject at the change of life; headaches arising from heat; sunstroke; angina pectoris, or breast pang.

Hamamelis Virginica (*Witch Hazel*).

PRINCIPAL USES.—Varicose veins, venous hæmorrhage, bleeding piles, tendency to bleeding from various internal organs, such as the lungs, stomach, kidneys, bowels, bladder, uterus, or rectum when the blood is dark venous; chilblains; some female affections, as for instance, copious dark menstruation with pains referred principally to the ovaries; inflammation of the veins.

Hepar Sulphuris (*Impure Sulphide of Calcium.*)

PRINCIPAL USES.—Affections of the skin, glands, respiratory mucous membranes and larynx; croup when the cough has become loose; hoarseness; wheezing breathing; loss of voice; scald head; abscesses; boils; enlarged glands of a scrofulous nature; gumboil; whitlow. It is antidotal to the effects of mercury, and facilitates suppuration. Scrofulous ophthalmia; chronic loose cough; chronic dyspepsia; piles and constipation.

Hydrastis (*Golden Seal*).

PRINCIPAL USES.—Diseases of the mucous membranes, glands, and skin; discharges from the nose and ears of long standing; aphthous ulcers in the mouth and throat; indigestion; constipation; an ulcerated or fissured condition of the anus (internally and locally); gleet and leucorrhœa, used locally; tumours of the breast of a quasi malignant character, also locally.

Hyoscyamus Niger (*Henbane*).

PRINCIPAL USES.—Functional diseases of the brain and nervous system; spasmodic night cough relieved by sitting up; squinting or stammering of children; sleeplessness.

Ignatia Amara (*St. Ignatius' Bean*).

PRINCIPAL USES.—Consequences of grief, especially in persons of a hysterical disposition; nervous headache; hysteria; hypochondriasis (blues); sensation of a ball rising in the throat; (globus hystericus); results of fright, fainting, disappointment, etc.; digestive disorders; headache as of a nail driven into the brain; weight at the back of the head; premature and profuse menstruation; constipation with frequent urging to stool, and with flatulence.

Iodium (*Iodine*).

PRINCIPAL USES.— Scrofulous affections of the glands; goitre; inflammatory croup when membrane forms, and should then be used internally and locally by inhalation; chronic laryngitis; hydrocele (also locally).

Ipecacuanha (*Cephælis Ipecacuanha*).

PRINCIPAL USES.—Diseases of the respiratory organs; whooping cough; spasmodic cough, with tickling in the throat, rattling breathing, and sometimes nausea, vomiting, bleeding from the nose, or bloody expectoration; spasmodic asthma; hay fever; stomach derangement, with nausea and vomiting, sometimes accompanied by diarrhœa; morning sickness; dysenteric diarrhœa of children; bilious headache; dysentery; copious menstruation with nausea.

Iris Versicolor (*Blue Flag*).

PRINCIPAL USES.—Chronic sick headache with nausea and vomiting of bilious matters; diarrhœa, cholera.

Kali Bichromicum (*Bichromate of Potash.*)

PRINCIPAL USES.—Affections of the mucous membranes and skin; chronic bronchitis, with difficult expectoration of tough, stringy mucus, the digestive organs being at same time involved; cough with wheezing breathing and expectoration of stringy mucus; croup; hoarseness; polypus of the nose; ophthalmia of a strumous origin; chronic ulceration of the throat; papular eruptions; ulcers of the legs of a syphilitic character; chronic indigestion, with heartburn and yellowish thickly coated tongue; constipation and light colored stools.

Kali Iodidum (*Iodide of Potassium*).

PRINCIPAL USES.—Syphilitic affections (tertiary and secondary); chronic rheumatism; catarrhal affections of nose, larynx, trachea, and bronchial tubes; asthma; common cold in the head with watery discharge. The syphilitic and rheumatic pains which would call for this drug are always worse at night.

Lycopodium Clavatum (*Club Moss*).

PRINCIPAL USES.—Falling off of the hair; glandular swellings; chronic bronchial catarrh; indigestion, flatulence in the bowels; waterbrash; acidity; heartburn; chronic congestion of the liver; urinary disorders, *i. e.*, frequent urging to empty the bladder, with

painful excretion, reddish deposits and gravel in the urine; mental and physical debility; chronic constipation; scrofulous ulcers.

Mercurius (*Mercury*).

Principal Uses.—Glandular swellings, sometimes suppurating; mumps; sore throat, with swelling or ulceration; spontaneous salivation arising from causes other than mercury; swollen face; toothache from decayed teeth; earache; discharge from the ears; deafness from cold; canker of the mouth; thrush; cold in the head, with headache and sense of tightness, and discharge from the nose and eyes; gumboil; ophthalmia; torpid liver, with deficient secretion of bile; pale and fetid motions; jaundice; bilious diarrhœa; syphilitic ulcers; syphilis in its various manifestations; stomatitis; suppression of urine; certain forms of skin diseases (eczema rubrum); rheumatism, worse at night, with sour perspiration which affords no relief.

Mercurius Corrosivus (*Corrosive Sublimate*).

Principal Uses.—In all the affections described under the heading "Mercurius," but especially in dysentery with painful straining, burning pains, and discharge of blood and mucus; often useful in alternation with Aconite, if there be fever, and if not, with powdered Ipecacuanha.

Nux Vomica (*Poison Nut*).

Principal Uses.—Affections of the digestive organs arising from a depressed condition of the nervous system, especially when resulting from excessive study or brain work, anxiety and business cares, night watching, sedentary habits, too little out-door exercise, indulgence at table, abuse of stimulants, tobacco, coffee, and other excesses. Indigestion, constipation, biliousness; diarrhœa, alternating with constipation; frequent and ineffectual urging to stool; colic; flatulence; heartburn; water-brash; headache with giddiness; the after-effects of intoxication; piles; stomach cough; tongue coated at the back; sea sickness; nightmare; dry coryza; spasmodic asthma; spasms of various kinds; cramp in the lower limbs; seminal emissions; profuse and prema-

ture menstruation; falling of the womb; strangury; incontinence of urine from paralysis of the bladder; especially useful to persons of spare habit, firm or irritable disposition, and dark complexion. Sleeplessness, waking up early and unable to sleep again from over-active brain.

Opium, Papaver Somniferum (*White Poppy*).

Principal Uses.—Obstinate constipation with torpor of the bowels; apoplexy; effects of fright or sudden emotion; delirium tremens; convulsions of children from fright; typhus and typhoid fevers; general torpidity; retention of urine.

Phosphorus.

Principal Uses.—Chest affections; nervous and physical weakness; neuralgic affections; chronic bronchitis; pneumonia; cough, either dry or with expectoration of mucus or blood, and usually worse at night; hoarseness; loss of voice; consumption; diarrhœa; fatty degeneration in any part; chronic inflammation of the stomach and bowels; liver affections; seminal emissions; impotence; scanty menstruation; disease of lower jaw; night sweats; paralysis from lowered vitality or softening of the nerve centres; fistulous openings in the breast after abscess.

Podophyllum Peltatum (*May Apple, Duck's Foot*).

Principal Uses.—Derangements of the liver, such as inaction; bilous headache; constipation; piles; bilious diarrhœa and acute congestion of the liver. It has a decided action in those affections for which blue pill is commonly given.

Pulsatilla Nigricans (*Pasque Flower, Wind Flower*).

Principal Uses.—This remedy is especially adapted to females and persons of mild temperament and fair complexion; indigestion from eating rich or fat food (pastry, etc.), with thickly coated tongue, nausea, and vomiting of bile or mucus; acidity, heartburn or mucous diarrhœa; measles; chicken pox; remittent fever; cold in the head, with thick discharge from the nostrils; loose cough; agglutination of the eyelids; styes; deafness after measles; earache; gout and rheumatism; pains wandering from

one part to another; rheumatic gout with menstrual irregularity; varicose veins; suppressed or scanty menstruation; painful menstruation; leucorrhœa, and other female disorders; inflammation of the testicle and prostate gland complicating gonorrhœa.

Quiniæ Sulphas (*Quinine*).

PRINCIPAL USES.—Intermittent fever; neuralgia of the brow when arising from malaria; deafness, with noises in the ears; disorder of vision, fulness in and weight on the head; giddiness, and at times, bleeding from the nose.

Rhus Toxicodendron (*Poison Oak*).

PRINCIPAL USES.—Chiefly in rheumatic affections and sprains of the joints; acute and chronic rheumatism, worse during rest at night when warm in bed, or on first moving the parts; lumbago; sciatica; rheumatic paralysis; vesicular erysipelas; chicken pox; erythema; eczema; scald head; shingles; strains of tendons or ligaments; typhus fever; scarlatina rheumatica, otherwise called "dengue."

Sabina (*Savin*).

PRINCIPAL USES.—Copious menstruation (bright red discharge); frequent urination and urging to stool; threatened miscarriage.

Santoninum (*Active principle of Cina*).

PRINCIPAL USES.—As in Cina, but it is more active. It is best given in two grain doses before meals.

Sepiæ Succus (*Inky Juice of the Cuttle Fish*).

PRINCIPAL USES.—Female irregularities and skin diseases; itching pimples with roughness and cracking of the skin and discharge of a watery humor; painful menstruation—copious or scanty; leucorrhœa; greenish thick or copious watery discharge; indigestion; constipation; piles in females; falling and ulceration of the womb.

Silicea (*Silex*).

PRINCIPAL USES.—In unhealthy suppuration, as in glandular swellings, whitlows, and abscesses of all kinds; housemaid's knee;

rickets; scabs on the head and perspiration; scrofulous ulcers; fetid smell from the feet and armpits; diseases of bone and periosteum.

Spongia Tosta (*Roasted Sponge*).

Principal Uses.—Croup; croupy cough; dry, hard, barking cough, worse at night; hoarseness; goitrous swellings.

Spigelia (*Pink Root*).

Used chiefly in rheumatic affections of the heart; neuralgic headache; complicated acute rheumatism; angina pectoris; darting, teasing, stabbing pains in the face, with similar pains in the heart.

Sulphur (*Brimstone*).

Principal Uses.—Acts chiefly on the skin; itching eruptions, both papular and vesicular, aggravated by warmth; chronic diseases, such as indigestion, especially in scrofulous subjects; constipation; cough; ulcers; rheumatism; boils; whitlows; itch; scald head; incontinence of urine; piles; scrofulous affections generally; ophthalmia; copious dark menstrual discharge. It is frequently given to render the system susceptible to the action of other remedies.

Veratrum Album (*White Hellebore*).

Principal Uses.—Asiatic cholera; autumnal diarrhœa; diarrhœa with griping, and sometimes vomiting; cramps in the bowels or calves of the legs and other parts; headache, with nausea and vomiting; black vomit; cold perspiration and general coldness; whooping cough, during the convulsive stage; feeble irregular action of the heart.

CHAPTER II.

OUTWARD APPLICATIONS.*

Acne of the Face—

Sulphurous acid, pure.

Asthma and bad Paroxysms of Whooping Cough and Breast Pang—

Inhalations of Aconite (ten to twelve drops to the pint of nearly boiling water), Chloroform (twenty to thirty drops poured on a pocket-handkerchief, and the vapor inhaled), Nitrite of Amyl (three to five drops on a pocket-handkerchief, and the vapor inhaled).

Bed Sores—

Glycerine of Starch, Brandy, Arnicated plasters, Calendula ointment, Zinc ointment.

Bleeding from the Womb depending on Tumors—

Lotions of Ferri Perchlorid. and water (1—20).

Boils—

Arnica lotion, Lime water, Hot fomentations and Poultices.

Burns and Scalds—

Lime water and Linseed oil (equal parts), Carbolic oil 1-40, Solution of Carbonate of Soda (strong), Calendula ointment.

Cancer—

Citric Acid, Chlorate of Potash, Glycerine and Carbolic Acid, Tannin, Conium and Hydrastis lotions. (In varying strength by adding more or less of water).

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* When the strength of a preparation is not given in this list of Outward Applications, reference should always be made to the Disease as described in the text.

Cancer of the Breast—

Lotions of Hydrastis, Hamamelis, Bromium, Conium.

Carbuncle—

Hot fomentations, Linseed poultices, Raw Tomatoes, Charcoal poultices, Glycerine of Carbolic acid.

Chapped Hands and Skin generally—

Glycerine of Starch and Eau de Cologne, Petroleum ointment. Dermatol a specific.

Chilblains—

Iodine ointment, Tincture of Tamus communis, Tincture of Hamamelis, Calendula Cerate.

Chordee, Painful Erections—

Ointment of Belladonna.

Concussion—

Arnica ointment to be rubbed along the spine.

Contusions—

Lotions of Arnica, Hamamelis, Ruta and Conium.

Convulsions, Application to the Spine in—

Liniment of Chloroform (one part of pure Chloroform to nine parts of Olive oil, and shaken well).

Corns—

Glacial Acetic acid and Tincture of Thuja (equal parts), Arnicated plasters.

Cramps of the Calves—

Frictions with warm Olive oil and Chloroform (one part of the latter to nine of the former, and shaken well.

Dandriff

Frequent washing. The application of Glycerine of Borax (one drachm of the latter to an ounce of the former); also Glycerine of Carbolic acid one part of the latter to one hundred parts of the former.

Diphtheria—

Lotions of Kal. Permanganate, Glycerine and Muriatic acid,

Ferr. Perchlorid. Alcohol, Glycerine and Carbolic acid, Bromium and water.

Eczema—

Glycerine of Borax, Nitrate of Bismuth ointment, Lime water, Milk and water, Carbolic oil, Glycerine of Starch, Yolk of Egg and Water, Poultices, Glycerine and Petroleum Soaps, Saxoline.

Falling off of the Hair—

The following preparation has seldom failed in our hands to prevent falling off of the hair: ℞ Tinc. Cantharis, two drachms; Quinine Sulph., twenty grains; Jamaica Rum, four ounces; Alcohol, two ounces; Bay Rum, ten ounces. Mix and use morning and night, rubbing the scalp well.

Fistula in Ano, and Fissures about the Anus—

Glyceroles and Lotions of Calendula and Hydrastis, Ointment of Æsculus, Carbolic oil (one part of the acid to one hundred parts of Olive oil).

Freckles, to Remove—

Nitre moistened with water, Iodine lotions (one part to twelve of water), Ammonia liniment.

Frostbite—

Friction with Snow and Cold water applications.

Ganglion of the Wrist—

Ointment of Benzoic acid.

Gleet and Gonorrhœa in Women—

Injections of infusion of Hydrastis (one ounce to the pint of water), Injections of Goulard's extract (thirty drops to two tablespoonfuls of water).

Goitre—

Gunther Goitre Remedy.

Hay Fever—

Lotions of Nitrate of Quinine (Quinine two grains, dilute Nitric acid five drops, water one ounce, mix); or of Iodine and water (four or five drops of Iodium 1x to a wineglassful of cold water.

Herpes—

Glycerine and Cantharis.

Hydrocele—

Ointment of Iodine.

Inflamed and Enlarged Bunion—

Glycerine of Arnica or Veratrum viride; Iodine.

Inflamed or Caked Breast—

Glycerine and Belladonna, Glycerine and Phytolacca.

Inflammation of the Prostate Gland and Neuralgia of the Testicle—

Ointment of Atropia—thirty grains for application.

Inflammation of the Testicle—

Ointment of Mercury.

Leucorrhœa or the Whites, and Ulcerations of the Womb—

Injections of Carbolic acid and Glycerine (weak), Calendula and water, Hydrastis and water, Borax and water. Hydrastia Restorative Tonic, a teaspoonful before each meal.

Lumbago and Sciatica—

Liniments of Aconite, Rhus and Arnica, Hot baths, Hot fomentations, the Hot flat-iron, Liniment of Belladonna and Chloroform (one part of the latter to seven parts of the former).

Mumps—

Ointment of the Extract of Belladonna (one grain to the ounce), Ointment of Mercur. Bin-Iodid. (four to eight grains to the ounce.

Nævus, or Mother's Mark, To Remove—

Equal parts of Tincture of Thuja ø, and Acetic acid, Kreasote, Croton oil.

Neuralgia—

Chloroform and Belladonna liniment (one part of the former to seven parts of the latter); Chloroform and Laudanum, Ointments of Veratria and Aconitia, Hot fomentations, Strong infusion of Capsicum Pods.

Ozœna, or Ulceration of the Nose—

Buffum's Glycerole of Tar, Hydrastis, or Iodine, with water in varying strength.

Pains during Stool—

Ointment of Æsculus.

Polypus of the Ears and Nose—

Glycerine of Tannin, Glycerine of Sanguinaria, Pure Tannin.

Prutitus Vulvæ, or Itching of External Female Parts—

Calomel (one part) and Starch (five parts), Borax lotions, Ice.

Purulent Ophthalmia and that of Newly Born Infants—

Solution of Nitrate of Silver, ten grains to the ounce of distilled water for adults, and a five grain solution for infants and children.

Rickets and Wasting Diseases of Children—

Cod Liver oil by inunction.

Ringworm of the Body—

Sulphurous acid; Tinct. Iodine 1x.

Ringworm of the Scalp—

Tinct. Iodine, Glycerine of Carbolic acid, Canada Balsam, Indian Ink, Sulphurous acid.

Scabies or Itch—

Sulphur Ointment, Oil of Lavender, Vinegar.

Scalled Head—

Iodide of Sulphur ointment, Glycerine of Carbolic acid, Warm fomentations, Poultices.

Sore Nipples—

Glycerine of Calendula, Glycerine of Arnica, Tinct. of Benzoin.

Spinal Irritation—

Atropia ointment (thirty grains for a single application).

Sprains—

Lotions of Arnica and Rhus Tox.

Thrush—

Borax and Honey, Borax and Glycerine.

Toothache—

Tannin and Myrrh, Collodion and Carbolic acid, Laudanum, Chloroform, Aconite tincture, Belladonna tincture, Gelsemium tincture, a lump of carbonate into the cavity.

True Croup.

Iodine by inhalation (eight drops of Iodium 1x to a pint of nearly boiling water).

Ulcers—

Lotions of Liq. Arsenicalis (ten drops of the strong tincture to six ounces of water), Hamamelis, Calendula, Carbolic acid (one part of the acid to two hundred parts of water), Poultices of Conium, Bread and Linseed poultices, Nitric acid lotions, Nitrate of Silver lotions (one grain to the ounce of distilled water).

Ulcers of the Tongue and Mouth—

Lotions of Nitrate of Silver (one grain to the ounce of distilled water), and of Chlorate of Potash (three to five grains to the ounce of distilled water).

Venereal Disease—

Strong Nitric acid, solid Nitrate of Silver, Calendula lotions, and Mercurial lotion.

Warts—

Strong Nitric acid, Acetic acid, Tinct. Thuja ø, Nitrate of Silver.

Whitlow—

Hot fomentations and Poultices.

Wounds—

Calendula lotion, Carbolic lotion (one part of the acid to two hundred parts of water), Calendula plaster.

CHAPTER III.

CLINICAL DIRECTORY.*

INDEX TO CLASSIFIED DISEASES AND THEIR APPROPRIATE MEDICINES. (*See* also the Text).

Acidity — Sulphuric acid, Calcarea Carb.

Acne — Belladonna, Puls., Sulphur Fort., Kal. Iodid. Pur., Kal. Bromid. Pur., Rhus Tox., Ars. Iodid., Nux, Carbo Animalis, Hepar Sulph., Phosph. acid. LOCALLY.— Sulphurous acid pure.

Acute Bronchitis — Aconite, Bryonia, Tart. Emet., Kal. Bichrom., Ipecacuanha, Phosphorus, China, inhalations of Aconite or Kreasote.

Acute Inflammation of the Bladder—Aconite, Cantharis, Camphor (Rubini's).

Acute Inflammation of the Kidney — Aconite, Terebinth, Canth., Apis mell.

Acute Inflammation of the Larynx—Aconite, Spongia, Iodium, Hepar Sulph., Apis.

Acute Rheumatism — Salicylate of Soda, Aconite, Bryon., Rhus, Sulph., Pulsat., Merc. Corr., Caulophyllum, Spigelia, Cimicifuga.

Ague, or Intermittent Fever —Veratrum alb., Aconite, Bellad., Phosph. acid, Quiniæ Sulph. Pur., Pulsatilla, Ipecac., Nux Vom., Cedron, Eupatorium.

Albuminuria, or Albumen in the Urine — Aconite, Terebinth, Helonias, Phosphoric Acid, Apocynum.

Anæmia, or Watery Blood —Ferr. Mur., Arsenicum, Restorative Hydrastia Tonic.

Aneurism—Aconite, Veratrum viride, Iodide of Potassium Pure.

Angina Pectoris, Breast Pang, or Spasm of the Heart —Sulphuric Ether (one teaspoonful doses), Brandy, Nitrite of Amyl (four or five drops by inhalation), Glonoine.

Aphonia, or Loss of Voice —Phosphorus, Ignatia, Causticum, Hepar Sulph., Electricity.

Apoplexy — Aconite, Bellad., Opium, Arnica, Baryta Carb., Nux, Strych. Phosph., Cocculus, Zincum, Cuprum, Plumbum.

Asiatic Cholera — Rubini's Camphor, Veratrum alb., Cuprum Acet., Cantharis Terebinth.

Asthma—Aconite, Ipecacuanha,

* The doses and strength of remedy are described on pages 33, 34, 35, 36, and 37.

Lobelia, Cuprum, Hydrocyanic acid, Sambucus, Kal. Iodid., Nux Vomica, Ignatia, Hydrocyanic acid, Moschus, Inhalations of Aconite, Chloroform, Nitrite of Amyl.

Bilious Attacks — Sulphuric acid, Iris Versicolor, Bryonia, Mercurius, Nux Vomica, Pulsatilla.

Bleeding from the Bowels —Hamamelis, Sulphuric acid.

Boils—Belladonna, Silicea, Hepar Sulph., Sulphur. LOCALLY—Arnica lotion, Lime water, Hot fomentations, and Poultices.

Brain Fag—Phosphorus, Nux Vom., Phosphate of Strychnia, Ferr. Pyr.

Cancer—Arsenicum, Carbo Animalis, Conium, Ext. Hydrastis and Phosphorus, Lapis Albus. LOCALLY.—Citric acid, Chlorate of Potash, Glycerine and Carbolic acid, Tannin, Conium, Hydrastis in dilution.

Cancer of the Breast—Hydrast., Arsenicum. LOCALLY.—Hamamelis, Bromium, Conium lotions, Hydrastis lotions, Hydrastia Restorative Tonic.

Cancer of the Stomach—Arsenicum, Kreasote.

Cancer of the Womb—Arsenicum, Kreasote, Hamamelis, Secale, Sepia, Hydrocotyle Asiatica, Thuja. LOCALLY.—Lotions of Carbolic acid and water.

Carbuncle—Aconite, Bryonia, Apis, Ars., Rhus, Lachesis, Silicea. LOCALLY.—Hot fomentations, Linseed poultices, Raw Tomatoes, Charcoal poultices, Glycerine of Carbolic acid.

Catalepsy—Cannabis Indica.

Cataract — Belladonna, Merc. Corr., Phosph., Calc. Carb., Sulph., Pulsat.

Catarrh of the Nose—Camphor, Aconite, Arsenic, Merc. Corr., Nux V., Pulsat., Hydrast., Kal. Bichro., Bryonia, Glycerole of Tar.

Chlorosis—Ferrum (five or six grain doses), after food in water.

Chordee, or Painful Erections — Aconite, Cantharis. LOCALLY.—Belladonæ ointment.

Chorea, or St. Vitus's Dance —Ignatia, Ferr, Mur., Iodium, Cimicif., Belladonna, Cuprum, Agaricus, Viscum, Album, Zincum, Hyoscy.

Chronic Enlargement of the Tonsils—Mercur. Iodid., Calcarea Phosph., Belladonna, Sulphuric acid.

Chronic, or Habitual Indigestion—Nux Vomica, Pulsatilla, Sulphuric acid, Lycopodium, Carbo Vegetabilis, Bryonia, Sulphur, Antimonium Crud., Hydrastis, Arsenicum, Compound Digest Powder.*

Chronic Inflammation of the Bladder —Canth., Dulcam., Chimaphila, Pulsat., Cannab. Sat., Apis., Kali Iodid., Terebinth., Copaiba.

Chronic Inflammation of the Ovary — Conium, Platina, Hepar, Silicea, China, Phosphoric acid.

Chronic Kidney Disease—Bright's Disease—Liq. Arsenicalis, Terebinth, Phosph. and Nux V., Nitric acid, Cactus, Cuprum Acet.

Chronic, or long standing Bronchitis—(See "Acute Bronchitis.") Tartar Emet., Kal. Bichrom., Merc. Corr., Ipecac., Senega,

* Prepared by Gross & Delbridge, 48 Madison St., Chicago.

Hyoscyamus, Hepar Sulph., Bellad., Solania, Phosphorus, Spongia, Nitic acid, Carbo Veget., Pulsat.

Chronic, or long standing Inflammation of the Larynx (Windpipe)—Mercur. Bin-Iodid., Acid. Nitric., Kal. Bichrom., Hepar Sulph., Phosphorus, Carbo Veget., Causticum.

Chronic Rheumatism—Bryonia and Rhus Tox., and Pulsat. Sulph.

Cold in the Head—(See Catarrh of the nose).

Colic—Nux V., Chamomilla, Colcynth, Cocculus, Cina.

Concussion of the Brain—Arnica, Aconite, Belladonna, Spirit Ammon. Aromat., Liq. Ammoniæ, (by olfaction).

Congestion and Inflammation of the Brain—Aconite, Belladonna, Bryonia, Hellebor. nig., Apis, Arnica.

Congestion of the Liver—Bryonia, Merc., Nux Vomica, Chamomilla, Podophyllum, Hepar Sulph., Sepia, Iris, Versicolor.

Constipation—Sulphur, Nux V., Hydrastis, Natrum Muriat, Odium, Plumb. Acet., Lycopod.

Cough—Aconite, Bryonia, Belladonna, Phosphorus, Ant. Tart., Arsenic, Hepar Sulph., Chamomilla, Drosera, Hyoscyamus, Merc. Corr., Ipecacuanha, Ignatia, Nux Vomica, Pulsat., Kal. Bichrom., Spongia, Iodium, Acid. Nitric., Rumex crispus.

Deafness—Aconite, Mercurius, Belladonna, Arnica, Quinine, Phosph. acid, Sulphur, Calcarea, Carb., Kal. Iodid., Merc. Bin-Iodid., Calcarea Phosph.

Delayed First Menstruation—Pulsatilla, Sulphur, Ferr. Pyroph.

Delirium Tremens—Tartar. Emetic., Arsenic, Belladonna, Stramon, Hyoscy., Nux Vomica.

Dengue, or Rheumatic Scarlatina—Aconite, Gels., Bryonia.

Diabetes—Phosphoric acid, Uranium Nitrate and Mineral Waters of Vichy and Carlsbad.

Diarrhœa—Nux V., Pulsat, Ipecac., Aconite, Camphor, (Rubini's), Mercurius Corr., Arsenic, Sulphuric acid, China, Veratrum Alb., Iris V., Cham., Phos. acid

Dilatation of the Heart.—Digitalis (five drop doses). Infusion of Digitalis (one teaspoonful doses in water).

Diphtheria—Belladonna, Baptisia, Sulphuric acid, Muriatic acid, Kal. Permanganas Pur., Mercur. Cyanid., Carbolic acid, Chlorate of Potash pure, Bromium, Kal. Bichrom., Gelsem., Strychniæ Phosph.

Diseases of the Hip Joint—Aconite, Calcar. Phosph. Trit. and Silicea, Phosph., Hepar Sulph., Colocynth.

Disease of the Valves of the Heart—Spigelia, Aconite, Cactus.

Displacement of the Womb—Prolapsus—Belladonna, Sepia, Ferr. Iodid., Helonias and Stannum.

Diuresis, or Excessive Flow of Urine—Phosphoric acid, Ferr. Phosph., Scilla.

Dropsy after Scarlatina—Helleborus Nig., Apis, Arsenicum.

Dropsy from Heart Disease—Digitalis, Apocynum.

Dropsy from Kidney Disease—(Bright's)—Canth. Terebinth.

Dropsy of the Belly—Arsenic, Croton Tig. Apocy.

Dropsy of the Lower Extremities from Debility—Ferrum Pyrophosphate.

Dysentery—Aconite, Merc. Corr., Nux V.

Eczema—Rhus, Croton Tig., Canth., Merc. Corrosiv., Graphites, Hepar Sulph., Antimon. Crud., Arsenic. LOCAL APPLICATIONS.—Borax and Glycerine, Nitrate of Bismuth ointment, Lime water, Milk and water, Carbolic oil, Glycerine of Starch, Yolk of egg with water, Poultices, Glycerine and Petroleum soaps.

Cholera—China, Verat. Alb., Arsen., Iris, Camphor (Rubini's).

Enlargement of the Spleen—Iodide of Potassium pure, Merc. Bin-Iodid. and ointment of same drug.

Enteric, or Typhoid Fever—Baptisia, Charcoal, Ars., Bellad., Bryon., Phosph., Nux, Ipec., Kal. Chlor., Kal. Bichrom., Spongia, Sulphur.

Epilepsy, during Fit—Glonoine on the tongue (one or two drops), Nitrite of Amyl (three or four drops by inhalation).

Epilepsy, during Interval—Ignatia, Hydrocyanic acid, Belladonna, Calc. Phosph., Cuprum, Nux Vomica and Strych. Phosph., Cicuta, Cocculus, Opium, Plumbum, Sulphur, Kal. Bromid. and Kal. Iodid., Stramon., Agaricus, Arsenicum, Zincum, Artemisia, Silicea.

Erysipelas—Aconite, Belladonna, Rhus. Tox., Canth., Apis, Hepar Sulph., Arsenic, Lach., Pulsat., Bryon. Alb.

Erythema—Belladonna, Rhus, Apis, Nux V., Sulph., Trit., Quiniæ Phosph.

Excessive Menstruation—Crocus, Sabina, Ipecacuanha, Belladonna, Calcarea Carb., Chamomilla, Platina, Hamamel., Nux Vomica.

Fainting—Moschus, Camphor (Rubini's), Ammonia (by olfaction), Veratrum alb.

Fatty Disease of the Heart—Digitalis, Liq. Arsenic, Phosphorus.

Fistula in Ano—Calcar. Phosph., Silicea, Nux, Calendula and Hydrastis lotions.

Flatulence—Carbo Vegetabilis, Lycopodium, Nux Vomica, Pulsatilla, Argentum Nitric., Carbolic acid.

Foul Breath—Carbo Vegetabilis, Mercurius Corr., Nitric acid, Pulsatilla, Hepar Sulph.

Freckles—LOCALLY.—Nitre and water, Iodine lotions, Ammonia liniment.

Gall Stones—Calcarea Carb., Berberis, Gelsem., China, Carlsbad water, inhale Chloroform, apply Hot Fomentations with Chloroform and Aconite liniment.

Ganglion—Benzoic acid, Silicea, Ars. LOCALLY.—Ointment of Benzoic acid.

Gastralgia, or Stomach Pains—Nux Vomica, Bryonia, Pulsatilla, Arsenicum, Sulphuric acid.

Gastric Fever—Baptisia, Carbo Veg., Ipec., Ars.

Gastritis, or Inflammation of the Stomach—Aconite, Arsenicum.

General Dropsy—Digitalis, Apocynum, Apis, Canth.

Giddiness or Vertigo—Dig-

italis, Nux V., Sulphuric acid, Pulsat., Bellad., Gelsemium, Phosph., Phosph. Ac., Phosphat. Strych., Baryta Carb., Hydrocyanic acid, Argent. Nitric., Calcar. Phosph.

Glaucoma—Bellad. Phosph.

Gleet—Injections of Infus. Hydrastis, or Goulard's Extract (one drachm to the ounce of water), and Permanganate of Potass. (three grains to six ounces of water.)

Gonorrhœa—Aconite, Cantharis, Cannab., Mercur. Corrosiv., Sulphur.

Gonorrhœal Ophthalmia—LOCALLY.—Solution of Nitrate of Silver (three grains to the ounce of distilled water). Aconite internally.

Gonorrhœal Rheumatism—Aconite, Puls., Sulph.

Gout—Aconite, Colchic., Sulph., Bryon and Rhus Tox., Lycopod., Kal. Iodid., Arnica Nux, Pulsat., Nux Moschat., Gelsem

Gravel, or Stone—The medicines used in Gout (See Article), and Phosphoric acid, and Calcarea Phosph., Acid. Nitromuriatic, Freidrichshall and Carlsbad Waters.

Guinea Worm—Mechanical treatment.

Gumboil—Aconite, Bellad., Merc., Hepar Sulph.

Hay Fever and Hay Asthma—Arsenicum, Arsenic. Iodid., Ipecac., Nux Vomica, Sabadilla, Camphor (Rubini's); lotions of Nitrate of Quinine to the nostrils, also Iodine in solution by means of a syringe.

Hæmaturia, or Bloody Urine—Arnica, Hamamelis, Ferrum Muriatic.

Hæmoptysis, or Spitting of Blood—Arnica, Bryonia, Ferrum Aceticum, Millefolium, Hamamelis, Aconite, Phosphorus.

Hæmorrhoids, or Piles—Nux and Sulph., Æsculus Hip., Collinsonia, Aconite, Hamamelis, Muriatic acid.

Headaches—Aconite, Belladonna, Bryonia, Nux V., Glonoine, Gelsemium, Ferrum Pyrophosphate, Ignatia, Sulphuric acid, Colocynth, Calcar. Carb., Sepia, Iris versicolor, Pulsat.

Heartburn—Arsenicum, Capsicum.

Herpes—Rhus Tox, Hepar Sulph., Merc. Corr., Ars., Mezereum. LOCALLY.—Glycerine and Cantharis, Saxoline.

Hiccough—Nux Vomica, Belladonna.

Housemaid's Knee—Aconite, Bellad., Rhus, Kal. Iodid. LOCALLY.—Arnica; Surgical operation.

Hyrdrocele, or Dropsical Swelling of the Testis—Aconite, Spongia, Pulsat., Aurum Met., Kal. Iodid. LOCALLY—Unguent. Iodi.

Hydrophobia—Bellad., Stramon., Inhalations of Chloroform.

Hypertrophy, or Enlargement of the Heart—Aconite, Cactus, Arnica.

Hypochondriasis—Ignatia amara, Nux V., Natrum Muriat., Arsenicum.

Hysteria—Moschus, Ignatia amara, Valerian, Secale, Conium, Pulsatilla, Cocculus, Sepia, Assafœtida.

Impotency—Acid. Nitro-mur., Agnus cast., Phosphorus, Phosphoric Acid.

Incontinence of Urine—Canth., Nux V., Belladonna, Gels., Phosph. Acid, Emulsion of Santon-

ine, Belladonna, Ferr. Phosph., Benzoic Acid, Sulphur, Caust., Pulsat.

Indigestion, Acute—Nux Vomica, Pulsatilla, Ipecacuanha.

Indigestion, Chronic—See Chronic or Habitual Indigestion.

Indigestion without Pain—Calcarea Phosph., Ferrum Pyrophosphate, Compound Digest Powder.

Inflammation of External Ear—Aconite, Bellad., Sulph., Pulsatilla, Merc., Corr.

Inflammation of Internal Ear—Aconite, Belladonna, Pulsatilla, Mercurius, Sulphur, Silicea, cea, Hepar Sulph.

Inflammation of the Cornea—Merc. Corr., Apis, Hepar, Arsenicum.

Inflammation of the Eyes, Simple Catarrhal—Aconite, Bellad., Euphrasia, Merc. Corr.

Inflammation, Purulent of Adults—Locally.—Solution of Nitrate of Silver (ten grains to the ounce of distilled water). Aconite internally.

Inflammation, Purulent of Infants—Locally.—Solution of Nitrate of Silver (five grains to the ounce of distilled water).

Inflammation of the Endocardium, or Lining of the Heart—Aconite, Spigelia.

Inflammation of the Intestines—Aconite, Merc. Corr., Arsenicum, Podoph., Aloes.

Inflammation of the Liver—Aconite, Bryonia, Mercur. Dulcis, Hepar Sulph.

Inflammation of the Neck and Opening of the Womb and Ulcerations—Belladonna, Mercur. Corr., Arsenic. Locally.—Lotions of Hydrastis and Calendula, with Glycerine or Carbolic Acid and Glycerine (weak preparations).

Inflammation of the Nose—Belladonna, Sulphur.

Inflammation of the Ovary—Aconite, Pulsatilla, Hamamelis, Apis, Belladonna, Mercur. Corr., Colocy., Bryonia.

Inflammation of the Pericardium, or Covering of the Heart—Aconite, Spigelia, Colchic., Sulphur

Inflammation of the Prostate Gland—Aconite, Merc. Iodid., Pulsat., Kal. Iodid

Inflammation of the Spinal Cord—Belladonna, Oxalic acid, Phosph. and Electricity.

Inflammation of the Testicle—Orchitis—Aconite, Pulsat., Clematis, Belladonna, Aurum Metall.

Inflammation of the Tongue—Aconite, Mercurius Dulcis, Belladonna, Nitric acid, Apis.

Inflammation of the Vagina—Aconite, Canth., Mercur. Corr., Sepia. Locally.—Infusion of Hydrastis, Goulard's Extract (thirty to forty drops to an ounce of water).

Inflammation of the Veins—Aconite, Pulsat., Hamamelis, Lachesis.

Inflammation of the Womb—Aconite, Belladonna, Sabina, Sepia, Sulph.

Inflammatory Irritation of the Bladder—Aconite, Canth., Bellad.

Inflammatory Swelling of the Penis—Bellad., Apis.

Influenza—Bryonia, Eupatorium perf., Kal. Bichrom.

Iritis—Arnica, Aconite, Bellad., Merc. Corr., Clematis.

Irritable Bladder—Nux V., Belladonna, Ferr. Phosph.

Itching of the Anus—Nux V. Sulph., Nitric acid, Arsenic.

Jaundice—Bryonia, Merc., Chamomilla, Nux V., Hydrastis, Podoph., Aconite, Chelidonium, China, Crotalus, Phosphor., Arsenic.

Leucorrhœa—The Whites—Helonias, Pulsat., Sepia, Mercur. Iodid., Calcarea, Kreasote. Injections of Carbolic Acid and Glycerine, Hydrastia Restorative Tonic.

Lichen—Sulphur, Apis, Arsenic (Merc. or Kal. Iodid. if Syphilitic).

Mania—Belladonna, Stramonium, Hyoscyamus.

Measles—Aconite, Euphrasia, Pulsatilla, Bryonia, Kal. Bichrom., Cuprum Acet., Phosph., Sulphur.

Melancholy—Aurum Mur., Platina, Ignatia, Plumbum, Veratrum, Arsenicum, Iodine, Phosph.

Miliary Fever—Aconite, Baptisia, Ars.

Mumps—Merc. Corr., Merc. Iodid., Belladonna, Pulsatilla. Locally.—Extract of Belladonna oint. (one grain to the ounce), Oint. Merc. Bin-Iodid. (four to eight grains to the ounce).

Nævus, or Mother's Mark—Locally.—Thuja and Acetic acid, Kreasote, Croton oil.

Neuralgia—Aconite, Belladonna, Arsenicum, Coloc., Quinine, Spigelia, Kalmia latifolia, Sulphuric acid. Locally.—Chloroform and Belladonna Liniment, Chloroform and Laudanum, Ointments of Veratria and Aconitia, Hot fomentations.

Neuralgia of Joints—Argent. Nitric., Zinc. Valerianic, Plumb. Metall., Ignatia.

Neuralgia of the Testis—Aurum Metall., Coloc.

Obstruction of the Bowels—Belladonna, Nux V., Plumb., Opium.

Otalgia, or Earache—Chamomilla, Pulsatilla, Merc., Belladonna, Gelsemium.

Otorrhœa, or Discharge from Ears—Mercur., Hepar Sulph., Silicea, Calc. Carb., Sulph., Pulsatilla, Muriatic acid.

Ovarian Neuralgia—Atropia, Zinci Valerianas.

Ovarian Tumors and Dropsy—Apis, Iodine, Kal.-Bromid., Phytolacca.

Ozœna, or Ulceration of the Nose—Aurum Muriat., Kal. Bichrom., Nitric acid, and Pulsatilla. Locally.—Lotions of Hydrastis, or Iodine.

Pains during Stool—Æsculus and ointment of.

Painful Menstruation—Sepia, Sabina, Cimicif., Collinsonia, Aconite, Xanthoxylum, Pulsat., Gelsem., Caulophyll., Sulph., Borax, Belladonna, Merc.

Painter's Colic—Sulphuric acid, Platina, Sulphate of Magnesia, Iodide of Potassium.

Palpitation of the Heart—Moschus, Aconite, Ignatia, Nux Vomica, Pulsatilla, China, Phosphoric acid.

Paralysis, or Palsy—Nux V., Strych. Phosph., Zinc. Metall., Cuprum, Plumbum, Rhus Tox., Kal. Iodid., Aconite, Arnica, Hypericum, Gelsem., Caust., Phosph., Conium, Agaricus, Hyoscy., Merc., Zinc.

Peritonitis—Aconite, Bryon., Bellad.

Phthisis Pulmonalis, or

Consumption of the Lungs—Sulphuric acid, Pulsatilla, Calcarea Phosph., Arsenic. Iodid., Phosphorus, Bryonia, Ipecacuanha, Antimonium Tart., Drosera, Bellad., Hyoscy., Arnica, Ferrum Acet., Aconite, Phosphoric acid, Stannum, Baptisia, Kreasote, Syrup of Hypophosphite of Iron.

Phymosis, or Contracted Foreskin—The remedies of Gonorrhœa.

Pleurisy—Aconite, Bryonia, Sulph. (Tinct. of Iodine, locally).

Pleurodynia—Bryonia, Cimicifuga, Nux V., Pulsat., Arnica.

Pneumonia, or Inflammation of the Lungs—Aconite, Bryonia, Phosphorus, Tart. Emet., Sulphur. LOCALLY.—Poultices.

Polypus of the Ears—The medicines for Otorrhœa, Thuja. LOCALLY—Glycerole of Tannic acid and Glycerole of Sanguinaria.

Polypus of the Nose—Calcarea Carb., Teucrium, Thuja, Merc. Iodid., Kal. Bichrom. LOCALLY.—Pure Tannin, Glycerole of Sanguinaria, Teucrium as snuff.

Prolapse of the Bowel—Nux V., Ignatia, Podoph.

Pruritus Vulvæ—Itching of the External Parts—Nux Vomica, Sulphur, Pulsatilla, Sepia, Collinsonia, Silicea. LOCALLY.—Calomel (one part) and Starch (five or six parts), mix and dust over night and morning. Borax Lotions, Ice.

Purpura, or Land Scurvy—Sulphuric acid, Hamamelis, Phosph., Lachesis, Secale.

Quinsy—Aconite, Belladonna, Merc. Dulcis., Merc. Bin-iodid., Baryta Carb., Sulphuric acid. LOCALLY.—Inhalations of Steam and Belladonna.

Red Gum—Chamomilla, Puls., Nux V.

Relapsing Fever—Baptisia, Bryon. alb., Rhus Tox., Eupator. perf. Ars., Phosph.

Relaxed Throat, or Clergyman's Sore Throat—Belladonna, Merc. Iodid., Kal. Bichrom., Sulphur, Æsculus Hip., Hepar Sulph., Lachesis, Calc. Phosph., Carbo Vegetabilis, Phytolacca.

Remittent and Bilious Remittent Fever—Camphor (Rubini's), Gelsem., Aconite, Bellad., Quiniæ Sulph. Pur., Ars., Baptisia, Crotalus, Phosph., Veratrum alb., Argentum Nitric.

Retention of Urine—Aconite, Cantharis, Camphor (Rubini's), Belladonna, Nux Vomica, Arnica, Clematis, Gelsem., Causticum.

Retroversion of the Womb—Bellad., Sepia, Ferr. Iod., Helon., Stannum.

Rheumatic Gout—Puls., Sabina, Cimicif., Sulph.

Rheumatic Ophthalmia—Aconite Spigelia.

Ringworm of the Body—Sulphur, Rhus Tox., Tellur., Ars. LOCALLY.—Sulphurous acid or Iodine.

Ringworm of the Scalp—Sepia, Calc. Carb., Sulph. LOCALLY.—Tinct. Iodine, Carbolic acid and Glycerine, Canada Balsam, Indian Ink, Sulphurus acid.

Rose Rash—Aconite, Bellad., Rhus Tox.

Rotheln—Aconite, Bellad., Pulsat., Bryon., Hepar.

Round Worms—Santonine.

Rupture—Aconite, Nux Vom.

Scabies or Itch—LOCALLY.—Sulphur ointment, Oil of Lavender, Vinegar.

Scalled Head—Sulphur, Silicea, Viola tricolor, Arsenic.

Scarlet Fever—Aconite, Belladonna, Bryonia, Arsenicum, Merc. Bin-Iodid., Camphor (Rubini's), Cuprum Acet., Ailantus glandulosa, Arum triphyllum, Helleborus nig., Apis.

Scrofula—Sulphur and Sulphuric acid., Calcar Carb., Calcar. Phosph., Silicea, Phosph., Arsenic, Merc Bin-Iodid., Kal. Iodid., Sepia, Ammon. Muriat., Merc. Corr.

Sea Scurvy—Sulphuric acid, Hamamelis, Lemon juice, Lime juice.

Shingles—See "Herpes."

Simple Fever—Aconite.

Simple Tumours of the Breast—Conium, Phytolacca, Hydrast., the latter also locally.

Sleeplessness—Aconite, Nux Vomica, Pulsat., Cham., Belladonna, Coffea, Hyoscy., Gels.

Softening of the Brain—Phosphor., Phosph. acid, Nux Vomica.

Sore Throat—Aconite, Belladonna, Belladonna, Merc. Dulcis, Merc. Bin-Iodid.

Spasms of the Gullet—Ignatia, Gelsemium.

Spermatorrhœa—Cantharis, Cinchona, Phosphoric acid, Staphysagria, Agnus castus, Sulphur, Nux Vomica.

Spinal Concussion—Arnica and Ointment of same along the spine.

Spinal Curvatures—Calcarea Phosph., Acid. Phosphor., Silicea, Hepar Sulph., Ferr. Pyrophosphas, Sulphuric acid, Nux V.

Spinal Irritation—Gels., Ignatia, Cimicifuga, Agaricus, Secale. Locally.—Atropia ointment, thirty grains for a single application, to be rubbed along the spine.

Sterility—Conium, Borax internally, and locally if Leucorrhœa.

Stricture, or Narrowing of the Uretha—Camphor (Rubini's), Aconite, Cantharis, Gelsem., Nux Vomica, Clematis.

Strumous or Scrofulous Ophthalmia—Belladonna, Merc. Corr., Sulph., Aurum Mur., Euphrasia, Ars., Conium, Hepar Sulph.

Suppressed Menstruation—Aconite, Belladonna, Hamamelis, Bryonia, Pulsat., Sulphur, Sepia, Ferrum, Natrum Mur., Graphites, Cyclamen

Suppression of Urine—Aconite, Terebinth, Canth.

Syphilis, or the Venereal Disease—Mercur. Sol., Mercur. Vivus, Mercur. Corr., Mercur. Bin-Iodid., Cinnabar, Mercur. Iodid., Nitric Acid, Kal. Iodid. Local Applications.—Acid. Nitric., Argent. Nitric. Calendula Lotion, Mercurial Lotion.

Tetanus—Aconite, Conium, Calabar Bean, Chloral, Tobacco, Nitrate of Amyl by inhalation.

Tetanus of Newly Born Infants—Ignatia, Belladonna, Nux.

Thread Worms—Santonine, Teucrium, Ignatia.

Tinnitus, or Noises in the Ears—Quinine, Salicylate of Soda, Nux Vomica, Belladonna, Phosphoric acid.

Toothache—Kreasote, Chamomilla, Belladonna, Mercurius, Bryonia, Rhododendron, Aconite, Coffea, Arsenicum, Pulsatilla. Locally.—Aconite, Bellad., Gelsem., Tannin and Myrrh, Collodion and Carbolic acid., Laudanum, Chloroform.

Typhus Fever—Baptisia, Belladonna, Stramonium, Phosphorus, Muriatic acid, Rhus., Ars., Terebinth., Merc., Bin-Iodid.

Ulcerated, or Fissured Anus—Æsculus Hip. and ointment, Nitric acid, Glyceroles of Calendula and Hydrastis; inject Carbolic oil.

Ulcer of the Stomach—Arsenicum, Hamamelis, Sulphuric acid, Uranium Nitrate.

Ulcers of the Mouth and Tongue—Nitric acid, Muriatic acid, Kal. Chlor., Merc. Corr., Gardiner's Mouth Wash.

Urticaria, or Nettle Rash—Sulphuric acid, Pulsat., Nux V., Antimonium Crudum, Dulcam., Anacardium, Apis, Ars.

Varicella, or Chicken Pox—Aconite, Bellad., Apis.

Varicocele, or an enlarged condition of the Spermatic Veins—Pulsat., Hamamel.

Varicose Veins—Nux Vomica, Sulphur, Arsenicum, Belladonna, Pulsatilla, Hamamelis.

Variola, or Small Pox—Aconite, Bellad., Tartar Emet., Merc. Corr., Hamamelis, Sulphur, Arsen.

Vomiting—Ipecacuanha, Kreasote, Apomorphia.

Vomiting of Blood—Arnica, Hamamelis, Ipecacuanha, Sulphuric acid.

Warts—Thuja, Sulphur, Calc. Carb., Nitric acid.

Waterbrash—Sulphuric acid, Nux Vomica, Pulsatilla and Bryonia.

White Swelling of Joints—Same as for Disease of Hip Joint; also Pulsat., Apis, Merc. Corr.

Whitlow—Silicea, Hepar Sulph. LOCALLY.—Hot fomentations and Poultices.

Yellow Fever—Aconite, Belladonna, Bryonia, Arsenicum, Carbo Vegetabilis.

Disorders During Pregnancy.

Albuminuria—Arsenicum, Apis., Merc. Corr.

Breast Pains—Belladonna, Bryonia, Liniment. Bellad., Pulsat., Conium.

Constipation—Collinsonia canad., and the usual remedies for constipation.

Cough and Shortness of Breath—Aconite, Bellad., Nux V., Lycopod.

Cramps in the Calves of the Legs—Cham., Veratrum alb.

Diarrhœa—Pulsatilla Phosphoric acid, Secale, Sulphur.

Difficulty of Urinating—Bellad., Pulsat., Nux V., Canth., Camphor (Rubini's), Sepia, Stannum.

Dyspepsia—See "Indigestion."

Headache—Belladonna, Nux Vom., Pulsat., Cocculus, Bryonia, Iris V.

Heartburn—Sulphuric acid, Calcarea Carb., Pulsat., Capsicum.

Itching of the External Parts—Collinsonia, Ambra.

Longing for Unusual Articles of Food—Sulphuric acid, Calcarea Carb., Carbo. Veget., Nitric acid, Pulsat.

Miscarriage—Sabina, Secale, Arnica, Chamomilla, Aconite, Calcarea, Sulphur, Mercur. Corr., China.

Nervous Irritability—Cimicifuga, Chamomilla, Pulsatilla.

Pain in the Back—Kal. carbon., Nux V., Arnica.

Rheumatism of the Womb—Cimicifuga, Aconite.

Salivation—Sulphur, Natrum Mur., Arsenic.

Sleeplessness—Aconite, Pulsat., Nux V., Coffea.

Toothache—Sepia, Cham., Magnesia Carb., Calcarea Carb., Kreasote, Staphysagria.

Vomiting—Ipec., Nux Vomica, Kreasote, Sepia, Oxalate of Cerium (two grain doses), Apomorphia.

Disorders During Lying-in Period.

After-pains—Arnica, Gelsemium, Cocculus, Chamomilla, Nux Vom.

Debility from too long Nursing—China, Calcarea Carb.

Engorgement of the Breasts during Weaning—Bryonia, Belladonna. LOCALLY.—Glycerole of Phytolacca.

Excessive Secretion of Milk—Pulsat., Calcar. Carb.

Hæmorrhoids, or Piles—Aconite, Pulsat., Belladonna,

Inflamed Breast—Bryonia, Belladonna, Hepar Sulph., Silicea, Phosph., Phytolacca. LOCALLY.—Glyceroles of Belladonna or Phytolacca.

Laceration of the Perinæum—LOCALLY.—Calendula lotions.

Mental Disorders During Lying-in—Platina, Cimicifuga, Pulsatilla, Hyoscyamus, Stramon., Cannab.

Milk Fever—Aconite, Bryonia.

Phlegmasia Alba Dolens, White Leg—Aconite, Pulsat., Hamamelis, Lotions of Aconite and Hamamelis.

Puerperal, or Lying-in Fever—Aconite, Belladonna, Nux Vomica, Bryonia, Merc. Corr., Colocy., Gelsem., Arsenic.

Retention of Urine—Aconite, Belladonna.

Sore Nipples—Glycerole of Calendula or Arnica, Tinct. Benzoin.

The Lochial Discharge—Sabina. Carbo Veget., Kreasote, Aconite, Belladonna.

Disorders During Change of Life.

Feverish Attacks—Aconite.

Flushings—Nitrite of Amyl, Lachesis, Sanguinaria, Bromide of Potassium.

Head Troubles—China, Glonoine, Lachesis, Nitrite of Amyl.

Sinking at the Pit of the Stomach—Cimicifuga, Hydrocyanic acid, Nux Vomica.

Diseases of Infants and Children.

Aphthæ, or Thrush—Sulphuric acid, Muriatic acid, Arsenicum. LOCALLY.—Lotions of Sulphuric or Muriatic acid, Borax and Glycerine or Borax and Honey.

Bronchial Asthma of Children—Aconite, Tart. Emet., Puls., Belladonna, Hepar S, Ipec., Nux Vom., Arsen., Camphor (Rubini's), Sulphur.

Bronchitis and Inflammation of the Lungs—Aconite, Phosphorus, Tartar Emet. Trit., China, Sulph.

Cancrum Oris, or Canker of the Mouth—Potass. Chlorate and lotion of same.

Chafing, or Soreness—Cham., Mercur. Corr., Calendula lotions.

Cholera, Infantile—Camphorated Chloroform, Veratrum alb., Arsenic.

Colic of Infants—Chamomilla, Nux Vomica, Arsenicum, Cina, Santonine.

Consumption of the Bowels—Merc. Corr., Phosphoric Acid, Arsenic. Iodid., Calcarea Carb., Syrup of the Iodide of Iron.

Convulsions—Belladonna, Chamomilla, Aconite, Camphor (Rubini's), Ignatia. LOCALLY.—Chloroform and Belladonna Liniment to spine.

Diarrhœa of Children—Nux V., Mercurius Corr., Aconite, Arsenic, Podoph., Chamomilla, Sulphuric acid, Phosphoric acid, Arsenicum.

Enlarged Glands—Merc. Bin-Iodid., Sulphuric acid, Belladonna, Silicea, Hepar Sulph.

False, or Spasmodic Croup—Aconite, Sambucus, Gelsem., Belladonna, Cuprum Acet., Spongia, Iodium, Phosphorus, Hepar Sulphur.

Hydrocephalus, Water on the Brain—Aconite, Belladonna, Sulphur., Bryonia, Helleborus niger, Iodine, Iodide of Potassium, Calcarea Phosph., Arsenic, Arsenic. Iodid., Pulsatilla.

Incontinence of Urine, Wetting the Bed—See "Disorders of Urinary Organs."

Infantile Paralysis—Belladonna, Nux Vomica, Secale, Plumbum.

Infantile Remittent Fever—Baptisia, Pulsat., Hyoscy., Gelsem., Chamomilla.

Leucorrhœa, The Whites—Silicea and Calcarea Carb.

Painful Dentition—Calcarea Phosph., Aconite, Chamomilla, Belladonna, Chloric. Ether, Kreasote, Sulphur.

Prolapse, or Falling of the Bowel—Podoph., Ignatia.

Rickets—Calcarea Phosph., Phosph. acid, Silicea, Nux V., Pulsat.; Cod Liver oil, internally and by inunction.

Sleeplessness of Children—Chamomilla, Belladonna, Hyoscyamus.

Stammering of Children—Stramonium.

True Croup—Aconite, Spongia, Hepar, Kal Bichrom., Phosph., Inhalation of Slacked Lime.

Vomiting of Food—Ipecac., Nux V., Sulphuric acid, Calcar. Carb.

Whooping Cough—Aconite, Ipecac., Drosera, Corallium Rubrum, Cuprum Acet., Phosphorus, Belladonna, Nitrite of Amyl Pure by inhalation. (Three drops on a pocket handkerchief, and the vapor to be inhaled). Tartar Emet., Hepar Sulph.

General (or Non-Classified) Diseases.

Abscess—Hepar Sulph., Silicea.

Bed Sores—Glycerine of Starch, Brandy, Arnicated plaster, Calendula or Zinc ointments.

Bunion—Applications of Glycerine of Arnica, Veratrum viride or Iodine. INTERNALLY.—Hepar S., and Silicea.

Burns and Scalds—Aconite, Arsenicum, Camphor (Rubini's). LOCALLY.—Lime water and Linseed oil, Carbolic oil, Solution of Carbonate of Soda, Calendula ointment.

Chapped Hands and Skin—Applications of Glycerine of Starch and Eau de Cologne.

Chilblains—Belladonna, Pul-

sat., Arsenic. LOCALLY. — Hamamelis, Calendula or Iodine ointments.

Contusions—LOCALLY—Arnica, Hamamelis, Ruta or Conium lotions.

Corns—Applications of Glacial Acetic acid and Tinct. Thuja (equal parts), Arnicated plasters.

Cramps in the Calves—Arnica, internally and externally, Nux Vomica, Cuprum Acet., Chamomilla, Secale, Aconite. LOCALLY. — Frictions with warm Olive oil and Chloroform (equal parts).

Falling Off of the Hair — Phosphoric acid. LOCALLY.—Cantharis Pomade, Phosphorus and Castor Oil Pomade.

Frostbite—Friction with Snow, Cold water, avoidance of fires.

Glanders—Kali Bich., Baptisia, Phosphor.

Goitre—Iodium, Spongia, Phosphorus, Gunther's Goitre remedy.

Ingrowing Toe Nails—Calendula Lotion Lint.

Loss of Smell—Aconite, Pulsatilla, Mercurius Corr., Sulphur Sanguinaria, Aurum Muriat.

Lumbago—Aconite, Rhus Tox., Arnica, Nux V. LOCALLY.—Rhus, Arnica, or Aconite Liniment.

Nightmare — See "Indigestion."

Nose Bleeding—Arnica, Hamamelis, Belladonna, Nux V., Aconite.

Priurgo, Itching of the Skin —Nux V., Sulphur Pulsat., Arsenic., Rhus. Tox., Apis. LOCALLY.— Bran baths, Lotions of Borax, Benzoic acid., Mezereum or Alcohol. Turkish baths, Careful diet.

Sciatica—Aconite, Rhus Tox., Colchic., Liq. Arsenic., Colocy., Arnica, Phosphate Strych., Helonias. LOCALLY. — Belladonna and Chloroform liniments, or application of hot flat iron.

Sea Sickness—Nux V., Cocculus, Ipec., Petroleum.

Sprains—Aconite, Arnica, Rhus, Bryonia, Kal. Iodid., Calcar. Phosph. LOCALLY. — Arnica and Rhus lotions.

Squinting—Cham., Bellad., Hyoscy., Gels., Spigelia.

Stiff Neck — Aconite, Dulcamara, Bryonia, Rhus, Belladonna, Nux. LOCALLY.—Belladonna, liniment, Infusion of crushed Capsicum pods.

Sunstroke, Heat Apoplexy — Stimulants, Glonoine, Aconite, Belladonna.

Suspended Animation—See "Artificial Respiration."

Stye—Pulsat., Hepar Sulph.

Ulcers — Arsenicum, Calcarea Phosph., Silicea, Merc. Corr., Nitric acid, Nux Vomica, Hamamelis. LOCALLY.—Lotions of Hamamelis, Calendula, Carbolic acid, or Nitric acid and water, Poultices of Conium or Bread and Linseed, Nitrate of Silver cauterization.

Wounds, Cuts—Arnica, Aconite, Bellad. LOCALLY.—Calendula Plaster and lotion, Carbolic lotion.

GLOSSARY.

ABNORMAL. Unnatural.
ACETIC ACID. Vinegar.
ADIPOSE TISSUE. The tissue which encloses the fat.
AGUE. Intermittent fever.
AGUE CAKE. Enlarged Spleen.
ALOPECIA. Loss of the Hair.
AMBLYOPIA. Impairment of vision.
AMENTIA. Mental weakness.
AEÆMIA. Poverty of blood.
ANASARCA. General dropsy.
ANCHYLOSIS. Stiffness of joints.
ANOREXIA. Loss of appetite.
ANTHRAX. Carbuncle.
ANTISEPTICS. Agents to counteract putrefaction.
ASCITES. Dropsy.
ASPHYXIA. Suspended animation.
ASTHENIA. Exhaustion.
ATAXY. Inability to contract the limbs.
ATROPHY. Wasting.
AXILLA. Armpit.

BREAST PANG. Angina pectoris.

CACHEXIA. A bad habit of body.
CALCULUS. Stone in the bladder.
CARIES. Ulceration of bone.
CEREBRAL. Relating to the brain.
CIRRHOSIS. Atrophy of liver.
CLIMACTERIC. Periods at which important changes occcur.
COMA. Lethargic sleep.
COUP DE SOLEIL. Sunstroke.
CRUSTA LACTEA. Milk crust.
CYST. A sac.

DESQUAMATION. Scaling of the skin.
DIGITAL. Pertaining to the finger.
DIURITIC. Having the power to increase the flow of urine.
DIATHESIS. Constitutional predisposition to disease.
DYSPNÆA. Difficult breathing.
DYSURIA. Difficulty in making water.
DYSCRASIA. A morbid condition of the system.

ECCHYMOSIS. Discoloration under the skin.
EFFETE. Worn out.
ENDEMIC. Peculiar to a particular locality.
ENCEPHALOMA. Soft cancer.
ENURESIS. Incontinence of Urine.
EPISTAXIS. Bleeding from the nose.
EPITHLEUM. The cuticle.
EXOSTOSIS. A tumor of the surface or in the cavities of bones.

FÆCES. Excrement.
FEMUR. The thigh bone.
FONTANELLES. The space in the head of an infant at the juncture of the bones.

Fungoid Excrescences. Proud flesh.

Gangrene. Mortification.
Gastric. Pertaining to the stomach.
Gastralgia. Pain in the stomach.
Glottis. Opening of the windpipe.

Hematemesis. Vomiting of blood.
Hemoptysis. Discharge of blood from the lungs.
Hemorrhage. Discharge of blood.
Hectic Fever. Protracted fever.
Hemorrhoids. Piles.
Hemiplegia. Paralysis of one side.
Hepatisis. Inflammation of liver.
Hyperemia. Local excess of blood.
Hypertrophy. Enlargement of parts.
Hypodermic. Under the skin.

Idiopathic. A primary disease.
Idiosyncrasy. Peculiarity of temperament.
Incipient. Commencing.
Indurated. Hardened.
Insomnia. Restlessness in sleep.

Lachrymal. Relating to tears.
Lactation. Suckling.
Lithotomy. Cutting for stone.
Lochia. Discharge from the womb after delivery.
Luxation. Dislocation.

Mamma. Breasts of the female.
Marasmus. Wasting away of the body.
Menses. The monthly period.
Metastasis. Passing of a disease from one part of the body to another.
Miasma. Infection floating in the air.
Micturation. Urination.

Narcotic. Anything inducing sleep.
Nares. Nostrils.
Necrosis. Mortification of bony parts.
Nephitis. Inflammation of the kidneys.
Neurotic. Relating to the nerves.
Normal. That in which there is no deviation from the general rule.

Obesity. Excessive fatness.
Œdema. Local dropsical swelling.
Osseous. Bony.
Ossification. Formation of bone.

Palpation. Pressure of the fingers upon an organ to detect disease.
Paraphlegia. Paralysis of the lower half of the body.
Parturition. The act of bringing forth.
Prognosis. The art of judging beforehand the cause of disease.
Puerperal. Belonging to childbirth.
Pyæmia. Purulent infection.
Pyrexia. A state of fever.
Pyrosis. Heart-burn.

Rigor. Coldness with shivering.
Rupture. Hernia.
Rugose. Wrinkled.

Sequelæ. Secondary diseases.
Sinapism. Mustard poultice.
Sporadic. Scattered here and there.
Styptic. An astringent.

SYNCOPE. Fainting.

TAMPON. A plug used for stopping hemorrhage.
TRAUMATIC. Pertaining to a wound.
TUMEFACTION. Swelling.
TYMPANUM. The drum of the ear.

UMBILICUS. The navel.
URETHRA. The urinary canal.
URTICARIA. Nettle rash.

VARIOLA. Small-pox.
VISCERA. Bowels.
VISCID. Glutinous, Sticky.

ZYMOTIC. Infectious, contagious.

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